

<110> Rosen et al.

<120> 31 Human Secreted Proteins

<130> PZ033P1

<140> Unassigned

<141> 2000-03-20

<150> 60/101,546

<151> 1998-09-23

<150> 60/102,895

<151> 1998-10-02

<160> 140

<170> PatentIn Ver. 2.0

<210> 1

<211> 733

<212> DNA

<213> Homo sapiens

<400> 1

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| aattcgaggg  | tgcaccgtca  | gtcttccctct | tccccccaaa  | acccaaggac | accctcatga | 120 |
| tctccccggac | tcctgaggtc  | acatgcgtgg  | tggtggacgt  | aagccacgaa | gaccctgagg | 180 |
| tcaagttaa   | ctggtacgtg  | gacggcgtgg  | aggtgcataa  | tgccaagaca | aagccgcggg | 240 |
| aggagcagta  | caacagcacg  | taccgtgtgg  | tcagcgtcct  | caccgtcctg | caccaggact | 300 |
| ggctgaatgg  | caaggagtac  | aagtgcgaagg | tctccaacaa  | agccctccca | acccccatcg | 360 |
| agaaaaccat  | ctccaaagcc  | aaagggcagc  | cccagagaacc | acaggtgtac | accctgcccc | 420 |
| catccccgga  | tgagctgacc  | aagaaccagg  | tcagcctgac  | ctgcctggtc | aaaggcttct | 480 |
| atccaagcga  | catcgccgtg  | gagtgaggaga | gcaatgggca  | gccggagaac | aactacaaga | 540 |
| ccacgcctcc  | cgtgctggac  | tccgacggct  | ccttcttctt  | ctacagcaag | ctcaccgtgg | 600 |
| acaagagcag  | gtggcagcag  | gggaacgtct  | tctcatgctc  | cgtgatgcat | gaggctctgc | 660 |
| acaaccacta  | cacgcagaag  | agcctctccc  | tgtctccggg  | taaatgagtg | cgacggccgc | 720 |
| gactctagag  | gat         |             |             |            |            | 733 |

<210> 2

<211> 5

<212> PRT

<213> Homo sapiens

<220>

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Trp Ser Xaa Trp Ser

1

5

<210> 3

<211> 86

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ccccgaaatat ctgccatctc aattag 86

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gcggcaagct ttttgcaaag cctaggc 27

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gcccctaact ccgcccagtt ccgcccattc tccgcccatt ggctgactaa ttttttttat 180  
ttatgcagag gccgaggccg cctcggcctc tgagctattc cagaagtagt gaggaggctt 240  
ttttggaggc ctaggctttt gcaaaaagct t 271

<210> 6

<211> 32

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<213> Homo sapiens

<400> 6

gcgctcgagg gatgacagcg atagaacccc gg 32

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<211> 31

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<400> 7

gcgaagcttc gcgactcccc ggatccgcct c 31

<210> 8

<211> 12

<212> DNA

<213> Homo sapiens

<400> 8

ggggactttc cc 12

<210> 9

<211> 73

<212> DNA

<213> Homo sapiens

<400> 9

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| gcggcctcga | ggggactttc | ccggggacttt | tcgggggact | ttccgggact | ttccatcctg | 60 |
| ccatctcaat | tag        |             |            |            |            | 73 |

<210> 10

<211> 256

<212> DNA

<213> Homo sapiens

<400> 10

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| caattagtca  | gcaaccatag | tcccgcctc  | aactccgccc | atcccgcctc  | taactccgccc | 120 |
| cagttccgccc | cattctccgc | cccatggctg | actaattttt | tttattttatg | cagaggccga  | 180 |
| ggcgcctcgc  | gcctctgagc | tattccagaa | gtagttagga | ggcttttttg  | gaggcctagg  | 240 |
| cttttgcaaa  | aagctt     |            |            |             |             | 256 |

<210> 11

<211> 2007

<212> DNA

<213> Homo sapiens

<400> 11

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| cccagatcac  | aatgacaaga  | tgccactcca  | accatgggac  | accttcatga  | tactagggtt  | 120  |
| gtacttctctg | gtctctggga  | tgacttcaga  | ttctgctggc  | caaggcaaat  | tgaactcagt  | 180  |
| tcaagatggc  | caccactggg  | agacgtgtag  | atagaaaaga  | ggactgggtc  | tggggaacatc | 240  |
| tttggaaaaa  | ccaacaaaca  | atagttctag  | ggagatgagg  | aaaaaaattc  | accttacagt  | 300  |
| gctaagaaaag | tgcattagaa  | tggaattgcc  | ctttccttaa  | ggagacagtt  | tgggctctcc  | 360  |
| ccttgccacc  | ggctctgggtg | ttttggctta  | tgcttccctt  | caggttgagc  | tgagcagtg   | 420  |
| gttatgggaa  | gctgctcaat  | ttcctttcat  | tcaattccac  | ctccttctctg | aactctaata  | 480  |
| gagggttaaaa | gggaaaaaaa  | aaaattctgt  | agatagcaaa  | ttgtgtgtgt  | gggggggggt  | 540  |
| gggggtgtgtg | gtgcatggag  | gacaacctgc  | aactctgagc  | tccctacttc  | ctggctcatt  | 600  |
| tcatgcagtc  | ttttctgaac  | agcctatgct  | gctgccttgc  | tggccccctg  | tgacggcgag  | 660  |
| ctggccgtgt  | ccgtagctgt  | cagtatgact  | tagatctagc  | tcctacctac  | tggttgatgt  | 720  |
| gttttttctc  | tttgccaagt  | gattgagctc  | gttttagtagt | ttccatcatt  | ctagtcttta  | 780  |
| agtaaaaaatg | acacttttag  | ggaaagtcag  | tctactccct  | tcttccctccc | cccaaacacg  | 840  |
| tggtctctctt | tgtcaggaaa  | ctcagccagt  | gggctgtggc  | agagaaagtc  | ctccactcag  | 900  |
| aggcagagac  | tgagttaagt  | catagggtggc | cttaggcac   | tgcatgtgtt  | gcaggggtta  | 960  |
| agtttttctt  | ccagttaggg  | ctggagggat  | gaattagctg  | gtacctgaag  | ccccgcttag  | 1020 |
| ctctgacact  | ctgccaacat  | cctctgatcc  | taggtgtggt  | gttgactgtc  | ctttcaagga  | 1080 |
| aaaacttgca  | atagagggaa  | aagccattaa  | agcagctccc  | tgcttcatca  | ttaagtccctg | 1140 |
| tcattccctac | cagccaatcc  | cagtcгаага  | agttatgctt  | tattcacttc  | tgtggaatta  | 1200 |
| caagttagag  | acacttttag  | gacctgatgg  | acaaagcagg  | agattcactg  | tcagctttcc  | 1260 |
| tggtcctctc  | cttacttctg  | tgggccttgc  | accgtcttag  | tttacacatc  | tgccaaaggg  | 1320 |
| gtagaattac  | acttcttttt  | acaggtaaat  | gtcaaggcac  | aatcagtttt  | caggaagtgc  | 1380 |
| ttcaagaccc  | cagggtgaaat | gaaaatgcta  | agtaccctct  | gaatggccat  | gcctgttacc  | 1440 |
| aggtgctgct  | tcttcagatg  | atggggagca  | cttttcaggg  | tgaaattcag  | gcgagttttg  | 1500 |
| cccaggcctg  | ctgtcttgag  | tacaaatgtg  | aatgatcgac  | tgactgcttg  | ttgccaaact  | 1560 |
| ggaaatgttc  | tgtagggatt  | tactggcatg  | gtatcattcc  | tagaagaaaa  | aaagagagaa  | 1620 |
| acttgactgc  | acattaaaaa  | aaaaaaaaatc | cacattgtga  | cttttattta  | atttctattt  | 1680 |
| tttttggttaa | taaaaagttg  | acttttttat  | ttgaatttgt  | ctttttttatt | tattgggtctg | 1740 |
| aaaggcattt  | caaagggtatt | ataataatat  | attgggtgtaa | tttaattggg  | gcaacatgct  | 1800 |
| ttatggctcc  | tgtcaaaaatt | ggtttttact  | cattttgattg | gtttgagccc  | agaacagcct  | 1860 |
| acaggggaaa  | aacaagctgg  | ataaccaccc  | aaagtgtttg  | tatttttcgtt | ggaaactgat  | 1920 |
| tttttgtttca | tttttggtttt | tgtttctgtt  | tttattttta  | aattaaataa  | attgcaatga  | 1980 |

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2007

<210> 12  
<211> 1813  
<212> DNA  
<213> Homo sapiens

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<222> (19)  
<223> n equals a,t,g, or c

<220>  
<221> SITE  
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<223> n equals a,t,g, or c

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atttaattgc agtgtacaaa attgtgtttg tatatagaat aaactgtctg ttgacagcga 1740  
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<212> DNA  
<213> Homo sapiens

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| tctgcctcct  | ggccttctgc  | ctggcaggct  | tcagcttcgt | cagggggcag  | gtgctgttca  | 120  |
| aaggctgtga  | tgtgaaaacc  | acgtttgtca  | ctcatgtacc | ctgcacctcg  | tgcgcggcca  | 180  |
| tcaagaagca  | gacgtgtccc  | tcaggctggc  | tgcgggagct | cccggatcag  | ataaaccagg  | 240  |
| actgccggtg  | cgggccaccc  | ctgtccttgc  | ctgtgtccag | gagcatcctg  | tgggggtggca | 300  |
| gggactcggg  | gagcctgaca  | ggccccacaaa | atgaggagaa | gactcactt   | atccatgccc  | 360  |
| ctgtggcccc  | acctgggtgg  | tggagatagg  | cggggaggaa | ggggtaaagg  | cgaggggcag  | 420  |
| gaggggttta  | tggggcacct  | gctatgtgct  | aggccctgtg | ctcagctctg  | ggccaggcag  | 480  |
| agcagggagg  | tgggtgggag  | ccccggaagc  | caatgtgggg | aggctgggtg  | ggggctgtgc  | 540  |
| aaggggagcct | tttccatcac  | cctgcccacc  | ctctgcccc  | agctacgaat  | acagctgggg  | 600  |
| ggctctatgg  | tgtccatgag  | cggctgcaga  | cgggaagtgc | ggaagcaagt  | ggtgcagaag  | 660  |
| gcctgtctgc  | ctggctctg   | gggttcccg   | tgccatgta  | gccctggggg  | cgctgagacc  | 720  |
| ccatgcaatg  | gccacgggac  | ctgcttggat  | ggcatggaca | ggaatgggac  | ctgtgtgtgc  | 780  |
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| gactgccaat  | cgggtgtgcag | ctgtgtgcac  | ggagtgtgca | accatggggc  | acgtggggat  | 900  |
| ggaagctgcc  | tgtgctttgc  | tggatacact  | ggccccact  | gtgatcaaga  | gctgcccgtc  | 960  |
| tgccaggagc  | tgcgctgtcc  | ccagaacacc  | cagtgtctcg | cagaggctcc  | cagctgcagg  | 1020 |
| tgcttgcccc  | gctacacaca  | gcagggcagt  | gaatgcccag | cccccaacc   | ctgctggcca  | 1080 |
| tcaccctgct  | cactgctggc  | ccagtgcctg  | gtgagcccca | aggggcaggc  | tcagtgtcac  | 1140 |
| tgccttgaga  | actaccatgg  | cgatgggatg  | gtgtgtctgc | ccaaggaccc  | atgcaactgac | 1200 |
| aaccttgggtg | gctgccccag  | caactctact  | ttgtgtgtgt | accagaagcc  | gggccaggcc  | 1260 |
| ttctgcacct  | gccggccagg  | cctggctcag  | atcaacagca | acgcttctgc  | gggctgcttc  | 1320 |
| gccttctgct  | ccccttctc   | ctgcgaccgg  | tctgccactt | gccaggtgac  | cgctgatggg  | 1380 |
| aagaccagct  | gtgtgtgcag  | ggaagcgagg  | tgggggatgg | gcgtgcctgc  | tacggacacc  | 1440 |
| tgctccacga  | ggtgcagaag  | gccacgcaga  | caggccgggt | gttccctgcag | ctgagggtcg  | 1500 |
| ccgtggccat  | gatggaccag  | ggctgccggg  | aaatccttac | cacagcgggc  | cctttcaccc  | 1560 |
| tgctgggtgc  | atccgtctcc  | tccttctcct  | ccaggaccat | gaatgcatcc  | cttgcccagc  | 1620 |
| agctctgtag  | acagcacatc  | atcgcagggc  | agcacatcct | ggaggacaca  | aggacccaac  | 1680 |
| aaacacgaag  | gtggtggacg  | ctggccgggc  | aggagatcac | cgtcaccttt  | aaccaattca  | 1740 |
| cgaaatactc  | ctacaagtac  | aaagaccagc  | cccagcagac | gttcaacatc  | tacaaggcca  | 1800 |
| acaacatagc  | agctaattgg  | gtcttccacg  | tggctacttg | cctgcgggtg  | caggccccct  | 1860 |
| ctgggacccc  | tggggatccc  | aagagaacta  | tcggacagat | cctcgctctc  | accgaggcct  | 1920 |
| tcagccgctt  | tgaaccatc   | ctggagaact  | gtgggctgcc | ctccatcctg  | gacggacctg  | 1980 |
| ggcccttcac  | agtctttgcc  | ccaagcaatg  | aggctgtgga | cagcttgctg  | gacggccgcc  | 2040 |
| tgatctacct  | cttcacagcg  | ggtctctcta  | aactgcagga | gttggtgcgg  | taccacatct  | 2100 |
| acaaccacgg  | ccagctgacc  | gttgagaagc  | tcatctccaa | gggtcggatc  | ctcaccatgg  | 2160 |
| cgaaccagg   | cctggctgtg  | aacatctctg  | aggagggggc | catcctgctg  | ggacccgagg  | 2220 |
| gggtcccgcg  | gcagagggtg  | gacgtgatgg  | ccgccaatgg | tgtgatccac  | atgctggacg  | 2280 |
| gcatcctgct  | gccccgacc   | atcctgcccc  | tcctgcccac | gcactgcagc  | gaggagcagc  | 2340 |
| acaagattgt  | ggcgggctcc  | tgtgtggact  | gccaagccct | gaacaccagc  | acgtgtcccc  | 2400 |
| ccaacagtgt  | gaagctggac  | atcttcccca  | aggagtgtgt | ctacatccat  | gacccaacgg  | 2460 |
| ggctcaatgt  | gctaaagaag  | ggctgtgcca  | gctactgcaa | ccaaaccatc  | atggaacaag  | 2520 |
| gctgctgcaa  | aggttttttc  | gggcctgact  | gcacgcagtg | tcctgggggc  | ttctccaacc  | 2580 |
| cctgctatgg  | caaaggcaat  | gtgagtccca  | tcctctcctg | gggtgaggta  | tggggaacac  | 2640 |
| aaggactcct  | tcaccggttg  | gccagtgact  | ggctgtgtgt | ctgggccaag  | cctgccactc  | 2700 |
| tggccttggg  | attctcatat  | ctatgcagtg  | gaaagtggga | tcaaattatt  | tctcatattt  | 2760 |
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&lt;210&gt; 14

&lt;211&gt; 1389

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 14

|            |            |            |            |             |            |     |
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| acagccccta | atggaacaat | tacaaaagca | ttacagggcc | ttacaagtga  | attagctgaa | 120 |
| aatcccggaa | taaatggccc | cttttcagg  | cttatggaaa | aatggtttgg  | aaaatggaaa | 180 |
| tgactcatga | cctcaatatt | tacttctctt | gcagttgtta | cagggtgtact | cattcttgta | 240 |
| ggttgctgta | ttacaccttc | tgttcatggg | ttgggtgcaa | ggcttacaga  | aacagctctt | 300 |

|             |            |             |            |             |            |      |
|-------------|------------|-------------|------------|-------------|------------|------|
| actaaaacct  | ccctcaattc | ttccccaccc  | tattcagata | aactcccact  | tctagatcac | 360  |
| caagaggaac  | aacagagcca | aattatgttt  | gaaaaatttg | aagaggggaaa | actataaaga | 420  |
| gggggatatt  | gccaggaacc | ataagttctc  | ttcaaacttc | gtgggtccttc | tgggtctgta | 480  |
| aacaaccctt  | cccaccta   | tgggtaccagg | accagcctct | tccttcctgc  | ctaataggcc | 540  |
| ctatttcaatt | tcaaacaata | gccaatcggg  | tttagatggg | gtgggtccaac | tctagttact | 600  |
| gggggaaagga | cacagaaaca | tgagctgcat  | taggggtaaa | aacccctgc   | cctagcccc  | 660  |
| ttgggtgtgct | cttgcaattg | ctttcagatg  | caagtagcac | cctttctgca  | gaagtaaagt | 720  |
| tgtcttgctg  | aggaattttc | agtctaagtg  | ctagttcttt | ctttgtggca  | cccaacacct | 780  |
| gttcccaaca  | atgagaatat | caacaaatag  | gaaatataac | aaagaaccaa  | acagaaatga | 840  |
| agataaagat  | acaataatga | aaattaaaaa  | ttcactggaa | gtgtttgaca  | tattatttga | 900  |
| ttccattctt  | cctaaaatg  | atttcaatct  | tcttaaattg | attcagtcct  | gttttgtgac | 960  |
| ctatccttga  | aatatgtgat | gtgatctatc  | ctggagaatg | ttctgtgtgc  | acttgagaag | 1020 |
| attacatatt  | tttcttttgt | taattgaaaa  | attctgtata | tggctattac  | atcaatttaa | 1080 |
| agtccactat  | tttgttattg | attttctatc  | tggattttct | attttttatt  | gaaagtgggg | 1140 |
| tactgaatta  | ttctaccatt | acactattgc  | tgtccatttc | tcctttcaga  | tattttgata | 1200 |
| tttgttctat  | atacttaggt | agtctaatag  | taggtacata | tgtatttaca  | attgctgtta | 1260 |
| tcttctctgt  | gaattcaccc | ttttatcatt  | atgtaatgac | tttgtctcct  | gggacagttt | 1320 |
| ttgacttaaa  | ttctaatttg | tgctatataa  | gaaaaaaaaa | aaaaaaaaaa  | aaaaaaaaaa | 1380 |
| aaaaaaaaaa  |            |             |            |             |            | 1389 |

&lt;210&gt; 15

&lt;211&gt; 1873

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 15

|             |             |             |             |             |             |      |
|-------------|-------------|-------------|-------------|-------------|-------------|------|
| ctccctgcaa  | ctaagttttt  | cctggggaaa  | aagcctgcag  | accaggaagt  | gggaggtgtc  | 60   |
| tggtgggaca  | ctgccctcaa  | aaggagcctt  | tctgagtgtc  | ggggcttcat  | ctgccagggc  | 120  |
| tgcacctcag  | caggcagtg   | gctcccagag  | ctggctgcag  | taaccgcag   | gctgtgccgg  | 180  |
| caggatgttg  | tctttgggtt  | ctgtttctgt  | tttagttctg  | acttgtgccc  | tggatgtggc  | 240  |
| tgagggccta  | gggtggggag  | aagtctccac  | aggtgggatt  | gaactcccca  | ggcacatggg  | 300  |
| ccttgtgggtg | ctgggtggaga | gagagtcccc  | agaggtttcg  | gacatgctac  | cgttaaaacc  | 360  |
| ttttcctcaa  | ggtgataggt  | acgtgtcaag  | gtgacccctg  | tcgcccatcc  | ggcagcttgg  | 420  |
| aagaagcccg  | taagatggac  | agatcagggg  | gggttgagg   | gtcccgtttg  | tgaaggagct  | 480  |
| ggggaggggg  | aggcaaggct  | gagcacagca  | gcccactgtg  | atgctctcag  | tgcagaggcc  | 540  |
| ccgggggggag | acccaggggg  | gcacccccca  | aaaccacacc  | atacagtggg  | tttcagttcc  | 600  |
| cccactcctg  | ccctttcact  | tctcctcggc  | tgcttggtctg | cctcacagggt | tgctcagcttg | 660  |
| agcaagggcc  | caagcggcct  | ctactcagag  | accctgggtg  | tcagagggga  | gtggggaagg  | 720  |
| tggacatggg  | catcagcaca  | gaccagcacc  | tctggtccat  | cctgcctggg  | catccacagg  | 780  |
| ggagtgccag  | ctcccacccc  | cagccacata  | ctgttctcag  | cttctgagtg  | gctgggctgt  | 840  |
| cccagagggc  | catgctgggc  | ctgagtgtctg | tccttgggca  | tatgcagatg  | gtgttgtatc  | 900  |
| caggggggttt | tcagggaagc  | tttagcactt  | tcataattaaa | acaaaaaatg  | ttggaatctc  | 960  |
| cattaaaatag | tcaagtctta  | gggatagtag  | taaaaacatg  | gctgtacatg  | gctggccagg  | 1020 |
| cacagtggct  | cacgcctata  | atcctagcac  | tttgggaggg  | tgaggtggga  | gggttggcca  | 1080 |
| agagcttgag  | accagcctgg  | tcaacatagc  | aagaccgctc  | tctacttgat  | tttttttttt  | 1140 |
| aaagtacatg  | gcaaagggca  | ttataaaagta | agatttgtat  | tagctttag   | ctgggttactg | 1200 |
| atgttcatag  | gaagggcctc  | aaccataata  | atggtgaaat  | aataaaatga  | gatgaataaa  | 1260 |
| tattagagag  | gtagaatagt  | acgtagaaaag | gttttagcaca | cattttgttt  | ttctgcacga  | 1320 |
| ggtggttgtt  | ctctgctttc  | aaagtgtctg  | aacgaatgtc  | ctacattgtc  | tgccctccat  | 1380 |
| gaggttctga  | ccgcccttga  | gaacagatgt  | acccactaca  | gggtgaagggt | gagaatgtaa  | 1440 |
| tttgaagctg  | aatgagaatg  | gagctggatt  | ctaaaattat  | atccccctctc | agattcacaa  | 1500 |
| gtgttcacac  | atttaggcaa  | gaagccctaa  | gtcctaacc   | tggacatgtg  | gattgtccag  | 1560 |
| gaccatccca  | gactttttgtg | gctggattaa  | tcagacctga  | gcaaaactgga | tgcaaagagg  | 1620 |
| agggggtagg  | ttccgggaag  | gggccctggg  | ggccaggggtg | ggatgagtg   | ctggtgctga  | 1680 |
| gcccagagcc  | caggcccttg  | caatgttttt  | cttggatctg  | ctggggggcag | tttaagctaa  | 1740 |
| taaaagcctc  | ctctttttatt | cccagggaca  | catggaagct  | gcctcgtgcc  | gaattcgata  | 1800 |
| tcaagcttat  | cgataccgtc  | gacctcgagg  | ggggggcccg  | taccacaattc | gccctatagt  | 1860 |
| gagtcgtatt  | aca         |             |             |             |             | 1873 |

<210> 16  
 <211> 2409  
 <212> DNA  
 <213> Homo sapiens

<400> 16  
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 tccccgccgg agatgaggaa actgaggctc agagaggcca catggcttgc tcgaggcccc 120  
 ccagccagtg tgaaccacaca tccctgcccc cagggccacc tgcaggacgc cgacacctac 180  
 cccctcagcag acgcccggaga gaaatgagta gcaacaaaga gcagcgggtca gcagtgttcg 240  
 tgatcctctt tgccctcctc accatcctca tctctacag ctccaacagt gccaatgagg 300  
 tcttccatta cggctccctg cggggccgta gccgccgacc tgtcaacctc aagaagtggg 360  
 gcatcactga cggctatgtc cccattctcg gcaacaagac actgccctct cggtgccacc 420  
 agtgtgtgat tgcagcagc tccagccacc tgctgggcac caagctgggc cctgagatcg 480  
 agcgggctga gtgtacaatc cgcataatg atgcacccac cactggctac tcagctgatg 540  
 tgggcaacaa gaccacctac cgcgtcgtgg cccattccag tgtgttccgc gtgctgagga 600  
 ggccccagga gtttgtcaac cggaccctcg aaaccgtgtt catcttcttg gggccccga 660  
 gcaagatgca gaagccccag ggcagcctcg tgcgtgtgat ccagcgagcg ggcctgggtg 720  
 tccccaacat ggaagcatat gccgtctctc ccggccgcat gcggcaattt gacgacctct 780  
 tccggggtga gacgggcaag gacagggaga agtctcattc gtggttgagc acaggctggt 840  
 ttaccatggt gatcgcggtg gagtttgttg accacgtgca tgtctatggc atggtcccc 900  
 ccaactactg cagccagcgg ccccgccctc agcgcagtc ctaccactac tacgagccca 960  
 aggggccgga cgaatgtgtc acctacatcc agaattgagca cagtgcgaag ggcaaccacc 1020  
 accgcttcat ccgagaaaag ggtcttctca tctgtggccc agctgtatgg catcaccttc 1080  
 tcccacccct cctggacctc ggccaccag cctgtgggac ctcaggaggg tcagaggaga 1140  
 agcagcctcc gccagccgc taggccaggg accatcttct ggccaatcaa ggcttgctgg 1200  
 agtgtctccc agccaatcag ggccttgagg aggatgtatc ctccagccaa tcagggcctg 1260  
 ggggaatctgt tggcgaatca gggatttggg agtctatgtg gttaatcagg ggtgtcttct 1320  
 ttgtgcagtc agggctctgc cacagtcaat cagggtagag ggggtatttc tgagtcaatc 1380  
 tgaggctaag gacatgtctt tcccatgag gccttggttc agagccccag gaatggacct 1440  
 cccaatcact cccactctg ctgggataat ggggtcctgt cccaaggagc tgggaacttg 1500  
 gtgttgcccc ctcaatttcc agcaccagaa agagagattg tgtgggggta gaagctgtct 1560  
 ggaggccccg ccagagaatt tgtgggggtg tggaggttgt gggggcggtg gggaggtccc 1620  
 agaggtggga ggctggcatc caggctcttg ctctgccctg agaccttga caaaccttct 1680  
 cccctctctg ggcacccttc tgcccacacc agtttccagt gcggagtctg agacccttct 1740  
 cacctcccc acaagtgcct tcgggtctgt cctccccgtc tggacctcc cagccactat 1800  
 ccttctgttg aaggctcagc tctttggggg gtctgggggt acctccccac ctctggaaa 1860  
 actttagggt acttttgcc aaactccttc aggggttggg gactctgaag gaaacgggac 1920  
 aaaaccttaa gctgttttct tagccctca gccagctgcc attagcttgg ctcttaaagg 1980  
 gccaggccct cttttctgcc ctctagcagg gaggttttcc aactgttga ggcgcctttg 2040  
 gggctgcccc tttgtctgga gtcactggg gcttccgagg gtctccctcg accctctgtc 2100  
 gtcttgggat ggctgtcggg agctgtatca cctgggttct gtcccctggc tctgtatcag 2160  
 gcactttatt aaagctgggc ctcaagtggg tgtgtttgtc tctgtctct ctggagcctg 2220  
 gaaggaaagg gcttcaggag gaggtgtga ggctggagg accagatgga ggaggccagc 2280  
 agctagccat tgcacactgg ggtgatgggt gggggcggtg actgccccag acttggtttt 2340  
 gtaatgattt gtacaggaat aaacacacct acgctccgaa aaaaaaaaaa aaaaaaaaaa 2400  
 aaaaaaaaaa 2409

<210> 17  
 <211> 1590  
 <212> DNA  
 <213> Homo sapiens

<400> 17  
 cccacgcgtc cgagcggcgt tgccatggcg gcgtctctgg gccaggtgtt ggctctgggtg 60  
 ctggtggccg ctctgtgggg tggcacgcag ccgctgctga agcgggcctc cgccggcctg 120

|             |            |            |             |            |            |      |
|-------------|------------|------------|-------------|------------|------------|------|
| cagcggggttc | atgagccgac | ctgggcccag | cagttgctac  | aggagatgaa | gaccctcttc | 180  |
| ttgaatactg  | agtacctgat | gccctttctc | ctcaaccagt  | gtggatccct | tctctattac | 240  |
| ctcaccttgg  | catcgacagg | ctggteccag | acctcagagt  | tcaggtcttc | atgctggaat | 300  |
| cctgggaagc  | actgaacgtg | gagtcaggag | atgtggggtt  | gagtcctgag | atttgctgtg | 360  |
| acttcattctg | gaagatgggg | ttttgatacc | ttttttaaag  | atctgaccct | ggctgtgccc | 420  |
| atctgtaact  | ctctggctat | catcttcaca | ctgattgttg  | ggaaggccct | tggagaagat | 480  |
| attggtggaa  | aacgtaagtt | agactactgc | gagtgcggga  | cgcagctctg | tggatctcga | 540  |
| catacctgtg  | ttagttcctt | cccagaaccc | atctcccag   | agtgggtgag | gacacggcct | 600  |
| tttcccattcc | tgccctttcc | tctgcagctg | ttttgcttcc  | ttgtggccat | cagagttccc | 660  |
| ttccccttga  | cagtctggag | aaagacagag | ctgggggtttg | ggattgaaga | ccagacccca | 720  |
| tctgagccct  | tctctcagcc | ctgtaccagc | tctactggc   | atggctgagc | tcagaccctc | 780  |
| ctgattttctg | ctattattcc | caggagcagt | tgctggcatg  | gtgctcaccg | tgataggaat | 840  |
| ttcactctgc  | atcacaaagt | cagtgaagta | gaccagggg   | caacagtcta | ccctttgagt | 900  |
| gggcccgaacc | cacttccagc | tctgctgcct | ccaggaagcc  | cctgggcat  | gaagtgtgtg | 960  |
| cagtgaagcgg | gatgggacct | agcacttccc | ctctctggcc  | ttagcttcc  | cctctcttat | 1020 |
| ggggataaca  | gctacctcat | ggatcacaa  | aagagaacaa  | gagtgaagaa | gttttgtaac | 1080 |
| cttcaagtgc  | tgttcagctg | cggggattta | gcacaggaga  | ctctacgctc | accctcagca | 1140 |
| acctttctgc  | cccagcagct | ctcttctctg | taacatctca  | ggctcccagc | ccagccacca | 1200 |
| ttactgtggc  | ctgatctgga | ctatcatgg  | ggcaggttcc  | atggactgca | gaactccagc | 1260 |
| tgcatggaaa  | gggccagctg | cagactttga | gccagaaatg  | caaacgggag | gcctctggga | 1320 |
| ctcagtcaga  | gcgctttggc | tgaatgaggg | gtggaaccga  | gggaagaagg | tgctgtcgag | 1380 |
| tggcagatgc  | aggaaatgag | ctgtctatta | gccttgcttg  | ccccacccat | gaggtaggca | 1440 |
| gaaatcctca  | ctgccagccc | ctcttaaaaa | ggtagagagc  | tgtgagcccc | ageccccact | 1500 |
| gactccagca  | cacctggcga | gtagtagctg | tcaataaatc  | tatggtaaac | agaaaaaaaa | 1560 |
| aaaaaaaaaa  | aaaaaaaaaa | aaaaaaaaaa |             |            |            | 1590 |

<210> 18  
 <211> 1567  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> SITE  
 <222> (36)  
 <223> n equals a,t,g, or c

|             |             |             |            |             |            |      |
|-------------|-------------|-------------|------------|-------------|------------|------|
| <400> 18    |             |             |            |             |            |      |
| acacggggag  | ggcgcgcccc  | ggtcgaccca  | cgcgtncggg | ycgggygcg   | ctaactggag | 60   |
| cgaaccccag  | cgtscgcccga | catggccctgg | accaagtacc | agctgttcc   | ggccgggctc | 120  |
| atgcttggtta | ccggctccat  | caacacgctc  | tcggcaaaat | ggcggaacaa  | tttcatggcc | 180  |
| gagggctgtg  | gagggagcaa  | ggagcacagc  | ttccagcacc | ccttctctca  | ggcagtgggc | 240  |
| atgttccctgg | gagaattctc  | ctgcctggct  | gccttctacc | tcctccgatg  | cagagctgca | 300  |
| gggcaatcag  | actccagcgt  | araccccag   | cagcccttca | accctcttct  | tttctgtccc | 360  |
| ccagcgtctc  | gtgacatgac  | agggaccagc  | ctcatgtatg | tggtctkkaa  | catgaccagt | 420  |
| gcctccagct  | tccagatgct  | gcggggtgca  | agtgatcata | ttcactggcc  | tggtctcggt | 480  |
| ggccttctctg | ggccgggargc | tggtgctgag  | ccagtggctg | ggcatcctag  | ccaccatcgc | 540  |
| ggggctggtg  | gycgtgggcc  | tggtctkacct | cctgagcaag | cacgacagtc  | aagcacaagc | 600  |
| ttcagcgaag  | tgatcacagg  | ggacctgttg  | atcatcatgg | cccagatcat  | cgttgccatc | 660  |
| cagatgggtgc | tagaggagaa  | gttcgtctac  | aaacacaatg | tgcacccact  | gcgggcagtt | 720  |
| ggcactgagg  | gcctcttttg  | ctttgtrate  | ctctccctgc | tgctgggtgcc | catgtactac | 780  |
| atccccgcgc  | gctccttcag  | cggaaaccct  | cgtgggacac | tggaggatgc  | attggacgcc | 840  |
| ttctgccagg  | tggggccagca | gccgctcatt  | gccgtggcac | tgctgggcaa  | catcagcagc | 900  |
| attgccttct  | tcaacttcgc  | aggcatcagc  | gtcaccagag | aactgagcgc  | caccacccgc | 960  |
| atggtgtgtg  | acagcttgcc  | caccgttgct  | atctgggcac | tgagcctggc  | actgggtgtg | 1020 |
| ragsccttcc  | atgcactgca  | gatccttggc  | ttcctcatac | tccttatagg  | cactgccttc | 1080 |
| tacaatgggc  | tacaccgtcc  | gctgctgggc  | cgmetgtcca | ggggccgggc  | cctggcagag | 1140 |
| gagagcgagc  | aggagagact  | gctgggtggc  | acccgcactc | ccatcaatga  | tgccagctga | 1200 |
| ggttcccttg  | aggcttctac  | tgccacccgc  | gtgctccwte | tmmctgagac  | tgaggccaca | 1260 |



|             |            |            |            |             |            |      |
|-------------|------------|------------|------------|-------------|------------|------|
| caggctgggtg | ggccccgaat | gccctatccc | caaggcctca | ccctgtcccc  | tcctgcaga  | 1320 |
| acccccaggg  | cagctgctgc | cacagaagat | aacaacaccc | aagtccctctt | tttctcacta | 1380 |
| cacctgcagg  | gtggtgttac | ccagccccc  | caagcctgag | tgcagtggca  | gacctcagct | 1440 |
| ctctggaccc  | ctoctacagc | actagagcta | aatcatgaag | ttgaattgta  | ggaatttacc | 1500 |
| accgtagtgt  | atctgaatca | taaactagat | tatcataaaa | aaaaaaaaaa  | aaaaaaaggg | 1560 |
| cggccgc     |            |            |            |             |            | 1567 |

<210> 19  
 <211> 3430  
 <212> DNA  
 <213> Homo sapiens

|             |             |             |             |             |             |      |
|-------------|-------------|-------------|-------------|-------------|-------------|------|
| <400> 19    |             |             |             |             |             |      |
| cagacatgca  | gaaagtacga  | atctgctctg  | agggcgggatg | gaaaatgaag  | aatctgacgt  | 60   |
| aaagcctcca  | gactggccaa  | acccaatgaa  | tgctacctcc  | cagtttccctc | agcctcagca  | 120  |
| ctttgacagc  | tttggcctcc  | gtctgcctcg  | ggatatcaca  | gagctgcccc  | agtggagtga  | 180  |
| ggggtagcccc | ttctacatgg  | ccatgggctt  | cccagggtat  | gacctctcgg  | ctgatgacat  | 240  |
| agctgggaag  | tttcagttca  | gccggggcat  | gcgcgcagct  | tacgacgcag  | ggttcaagct  | 300  |
| gatggtagtg  | gaatatgctg  | agagtaccaa  | caactgccag  | gctgccaaagc | agtttggagt  | 360  |
| attggaaaaa  | aacgttcgag  | actggcgcaa  | agtgaagcca  | cagcttcaaa  | acgcccacgc  | 420  |
| catgcggcgg  | gcattccgag  | gccccaaaga  | tgggaggttt  | gctctggtgg  | accagcgtgt  | 480  |
| ggccgaatat  | gtcagataca  | tgcaggccaa  | agggggacccc | atcaccgcgg  | aggcgatgca  | 540  |
| gctgaaagct  | ctcgaaatcg  | cccaggaaat  | gaacattcca  | gagaaagggg  | tcaaggcaag  | 600  |
| cttgggttgg  | tgctgaagaa  | tgatgagaag  | gtatgacctg  | tctctgaggg  | ataaagtgcc  | 660  |
| cgtgccccag  | cacctgccgg  | aagacctgac  | tgagaaactc  | gtcacttacc  | agcgcagtgt  | 720  |
| cctggctctg  | cgcaggggcg  | atgactatga  | ggtagctcag  | atgggggaatg | cagatgagac  | 780  |
| gcccatttgt  | ttagagggtgc | catcacgggt  | aactgttgat  | aaccaggggc  | aaaagcctgt  | 840  |
| cttgggtcaag | acaccaggca  | gggaaaaaact | gaaaatcaca  | gcaatgcttg  | gtgtcttggc  | 900  |
| tgatggggag  | aagttaccac  | cgtacatcat  | tttgagggga  | acatatatcc  | ccccggggaa  | 960  |
| gtttcccgat  | gggatggaaa  | ttcgtctgca  | ccgggtatggg | tggatgactg  | aagacttgat  | 1020 |
| gcaggactgg  | ttggaagtgg  | tgtggagacg  | gaggacagga  | gcagtgcaca  | agcagcgagg  | 1080 |
| gatgctgac   | ttgaatggct  | tccggggcca  | tgccacagat  | tccgtgaaga  | actccatgga  | 1140 |
| aagcatgaac  | actgacatgg  | tgatcatccc  | aggggggtctg | acctcacagc  | ttcaggtgct  | 1200 |
| ggatgtctgt  | gtctacaagc  | cactgaatga  | cagtgtgcgg  | gcccagtact  | ccaactggct  | 1260 |
| tctggctggg  | aacctggcgc  | tgagcccaac  | cgggaatgct  | aagaagccac  | ccctgggcct  | 1320 |
| ctttctggag  | tgggtcatgg  | tccgtgggaa  | tagcatctca  | agtgagtcca  | tcgtccaagg  | 1380 |
| gttcaagaat  | tgccatatct  | ccagcaactt  | ggaggaggaa  | gacgatgtcc  | tgtgggaaat  | 1440 |
| cgagagtga   | ttgccaggag  | gaggagaacc  | accaaaagat  | tgtgacaccg  | aaagcatggc  | 1500 |
| tgagagcaac  | tgaaggga    | gggaaagcaa  | atggaactct  | gattttaaaca | gctggggatg  | 1560 |
| aaattcctca  | agatgattat  | tcctgaaagt  | gtggatgcgc  | tggatgcgca  | gggaacatca  | 1620 |
| ggaaaaggcc  | acggggctct  | gaacagcccc  | ggtccagaca  | gcagcctgta  | catccatccc  | 1680 |
| aggacacagc  | ccagccccct  | cccacacccat | acaagggtatc | agaaaagtct  | aggacctatc  | 1740 |
| atttcatcag  | agacatgatc  | agaaaagaaa  | ctgcttctgc  | cccatttctt  | gttttggaga  | 1800 |
| ttactccatc  | tgtccatcaa  | aagaaacctg  | taaatatgaa  | agaacaaagg  | ttatttctctg | 1860 |
| gagaaaagac  | aattttattca | acaccaacaa  | gggactcatc  | atatgggcac  | aactctgggtg | 1920 |
| tccttctatg  | gagaaaacct  | caagtaaagt  | tttattctgc  | ctttgaaaat  | gcttccaaaa  | 1980 |
| gtagaccctg  | tccccacaca  | ggtcaagact  | acagagaagg  | ctttgtagaa  | atgtgtcacc  | 2040 |
| tatgtacacc  | tgctacttac  | acatttctct  | ttttggaaaa  | atgagatact  | tagaataaca  | 2100 |
| agaaaattaa  | gacatactgg  | cctgggtgcca | gcagatggct  | tttctataga  | caaactaggt  | 2160 |
| tagtgtggaa  | gatatagggt  | aaaataaact  | atgctgtttt  | atztatcttc  | ccaacctgat  | 2220 |
| tggcagctag  | acttttttag  | ggtctcatct  | aatggccctg  | tttttttcat  | tatttatattt | 2280 |
| aatgataggg  | caggatcttg  | tatgaaagct  | ctgtttctct  | aggctgcctg  | cagaagaagt  | 2340 |
| cgctataaat  | tactgttgt   | ctacatggtg  | caaggcccat  | tgactcatct  | gatgcttggt  | 2400 |
| ttgttaattt  | cttaatatct  | ttatcacggg  | gcagtgggag  | ggcttgggct  | tttagccaca  | 2460 |
| gctgttttaa  | gacttctgat  | ctcctgcctt  | gcagggaatag | gtgggaagtc  | attgaatttt  | 2520 |
| tacactatag  | taatttgcat  | tcccacataa  | gtttgagtgt  | tacgaaaaca  | ttcctttaaa  | 2580 |
| gggatctgtg  | ctacacaaaa  | tatgccagga  | cctcacagac  | aaagccattg  | ctagaaatgt  | 2640 |
| cattccaatg  | atcagatctg  | gaaacaggct  | gccataacca  | cttttctctt  | ttgtagactc  | 2700 |

|             |             |            |            |            |            |      |
|-------------|-------------|------------|------------|------------|------------|------|
| agctcacctg  | tatatTTTaaa | ctgttcttgg | catcttgaaa | cacctatttc | tactcaggtg | 2760 |
| ctcattgtcc  | tgttactgat  | tcacctttct | gatccttttc | aaccagtttt | cccccaagg  | 2820 |
| gggaaatttt  | acttaacctc  | tagtatttga | acaactcaat | atttgaattg | ttgccccatt | 2880 |
| tgcttttacc  | tgtactgtat  | tcttggtcat | ctcaaatggc | gtctaaaccc | agctactttg | 2940 |
| cattccagaa  | gtttccattc  | cctccaattc | cacctaatTT | ttcatctgtc | ctagtTactg | 3000 |
| gctctttctt  | catgtcttat  | ttctcttTgt | ttgggagctt | aaaagatttt | acaagacctg | 3060 |
| atTTttgggtt | ccttccttgg  | agccatagtt | accctgcca  | gaagagtaga | aaatgggttc | 3120 |
| aactcctgtt  | tcgtctccacc | aacacctctg | tgagtctcat | catcagctga | gcgatgatgc | 3180 |
| cttacagggtt | gcatagcact  | ggaactttcc | tagagtaacg | gctctgtctg | cagggtttct | 3240 |
| ctgggctcat  | tcttccactg  | acttaattat | gatctatgcc | taacagagcc | ccagtacaac | 3300 |
| tattttgcag  | aatggctgtt  | accctagaat | tactatagca | catattgaga | tatagttgta | 3360 |
| ctccctagta  | gataggaact  | gacccaaca  | ataaactttg | ataataaaaa | aaaaaaaaaa | 3420 |
| aaaaaaaaaa  |             |            |            |            |            | 3430 |

&lt;210&gt; 20

&lt;211&gt; 1529

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; SITE

&lt;222&gt; (1505)

&lt;223&gt; n equals a,t,g, or c

&lt;400&gt; 20

|             |             |            |             |            |             |      |
|-------------|-------------|------------|-------------|------------|-------------|------|
| gcggttgccg  | ccgccgccga  | tcagctgagc | wgagacggag  | ccgctgtcaa | ctctccaact  | 60   |
| cagctcagct  | gatcggttgc  | cgccgccgcc | gccgccagat  | tctggaggcg | aagaacgcaa  | 120  |
| agctgagaac  | atggacgtta  | atatcgcccc | actccgcgcc  | tgggacgatt | tcttcccggg  | 180  |
| ttccgatcgc  | tttgccccgc  | cggacttcag | ggacatttcc  | aaatggaaca | accgcgtagt  | 240  |
| gagcaacctg  | ctctattacc  | agaccaacta | cctgggtggtg | gctgccatga | tgatttccat  | 300  |
| tgtggggttt  | ctgagtcctt  | tcaacatgat | cctggggagga | atcgtgggtg | tgctgggtgt  | 360  |
| cacagggttt  | gtgtgggcag  | cccacaataa | agacgtcctt  | cgccggatga | agaagcgcta  | 420  |
| ccccacgacg  | ttcgttatgg  | tggtcatgtt | ggcgagctat  | ttccttatct | ccatgtttgg  | 480  |
| aggagtcatg  | gtcttttgtt  | ttggcattac | ttttcctttg  | ctgttgatgt | ttatccatgc  | 540  |
| atcgttgaga  | cttcggaacc  | tcaagaacaa | actggagaat  | aaaatggaag | gaatagggtt  | 600  |
| gaagaggaca  | ccgatgggca  | ttgtcctgga | tgccctagaa  | cagcaggaag | aaggcatcaa  | 660  |
| cagactcact  | gactatatca  | gcaaaagtga | ggaataaaca  | taacttacct | gagctagggt  | 720  |
| tgcagcagaa  | attgagttgc  | agcttgccct | tgtccagacc  | tatktttctg | ttgcgttttt  | 780  |
| gaaacaggag  | gtgcacgtac  | cacccaatta | tctatggcag  | catgcatgta | taggcccgaac | 840  |
| tattatcagc  | tctgatgttt  | cagagagaag | acctcagaaa  | ccgaaagaaa | accaccaccc  | 900  |
| tcctattgtg  | tctgaagttt  | cacgtgtgtt | tatgaaatct  | aatgggaaat | ggatcacacg  | 960  |
| atTTcttttaa | gggaattaaa  | aaaaataaaa | gaattacggc  | ttttacagca | acaatacgat  | 1020 |
| tatcttatag  | gaaaaaaaaa  | atcattgtta | agtatcaaga  | caatacgagt | aaatgaaaag  | 1080 |
| gctgttaaag  | tagatgacat  | catgtgttag | cctgttccta  | atccccatga | attgtaattg  | 1140 |
| gtgggatata  | aattagtttt  | tattattctc | ttaaaaatca  | aagatgatct | ctatcacttt  | 1200 |
| gccacctgtt  | tgatgtgcag  | tggaaactgg | ttaagccagt  | tgttcatact | tcstttacaa  | 1260 |
| atataaagat  | agctgttttag | gatattttgt | tacatttttg  | taaatttttg | aaatgctagt  | 1320 |
| aatgtgtttt  | caccagcaag  | tattttgttg | aaacttaatg  | tcattttcct | taagatgggt  | 1380 |
| acagctatgt  | aacctgtatt  | attctggacg | gacttattaa  | aatacaaaaa | gacaaaaaat  | 1440 |
| aaaacaaaaa  | aaaaaaaaaa  | gggcgggccg | tctagaggat  | ccckcgaggg | gccaagcgt   | 1500 |
| ttcngtgarg  | ttccccctaa  | agacccccg  |             |            |             | 1529 |

&lt;210&gt; 21

&lt;211&gt; 2425

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

<220>  
 <221> SITE  
 <222> (854)  
 <223> n equals a,t,g, or c

<220>  
 <221> SITE  
 <222> (858)  
 <223> n equals a,t,g, or c

<220>  
 <221> SITE  
 <222> (1155)  
 <223> n equals a,t,g, or c

<220>  
 <221> SITE  
 <222> (1253)  
 <223> n equals a,t,g, or c

<220>  
 <221> SITE  
 <222> (2197)  
 <223> n equals a,t,g, or c

<400> 21  
 tcgacccacg cgtccggcta aatatagacg ggagtgcctt tggtttgatc atcaaaggag 60  
 ccatgatggg tgagaggtgt ctactcttga atgtcctgtt tgctgggggt gcttcttggc 120  
 agaggctttt cagcaggaat cttagctgtc actgcttttg ggactattgt gatccttctc 180  
 tctagagctc tttcaacgtc ctgtgctgac tgccagctcc ttccagccca tcgaaggggg 240  
 tccagtggag ctgaaatgtg agaccgggct ctctccacag aggttggatg ttcaactcca 300  
 gttctgcttc ttccagagaaa accaggctct ggggtcaggc tggagcagct ctccggagct 360  
 ccagatttct gccgtgtgga gtgaagacac aggggtcttac tggtgcaagg cagaaacggt 420  
 gactcacagg atcagaaaac agagcctcca atcccagatt cacgtgcaga gaatccccat 480  
 ctctaagtga agcttggaga tccggggccc cgggggacag gtgactgaag gacaaaaact 540  
 gatcctgctc tgctcagtggt ctgggggttac aggaaatgtc acattctcct ggtacagaga 600  
 ggccacagga accagtatgg gaaagaaaac ccagcgttcc ctgtcagcag agctggagat 660  
 cccagctgtg aaagagagtg atgcccggcaa atattactgt agagctgaca acggccatgt 720  
 gcctatccag agcaagggtg tgaatatccc tgtgagaatt ccagtggctc gccctgtcct 780  
 caccctcagg tcttctgggg ccaggctgc agtgggggac ctgctggagc ttcactgtga 840  
 gggccttgag aggnctctncc ccaatcttgt accaatttta tcatgaggat gtcacccttg 900  
 ggaacagctc ggccccctct ggaggagggg cctccttcaa cctctctttg actgcagaac 960  
 attctggaaa ctactcctgt gaggccaaca acggcctggg ggcccagtg cagtggagcag 1020  
 tgccagctct catctcagga cctgatggct atagaagaga cctcatgaca gctggagttc 1080  
 tctggggact gtttgggtgt cttgggtttca ctgggtgttg tttgctgttg tatgccttgt 1140  
 tccacaagat atcangagaa agttctgcca ctaatgaacc cagagggggt tccaggccaa 1200  
 atcctcaaga gttcacctat tcaagcccaa cccagacat ggaggagctg canccagtgt 1260  
 atgtcaatgt gggctctgta catgtggatg tgggtttatt tcaggtcttg agcatgcacg 1320  
 cacgccagaa agctcagcaa acatcaggac acttctggag aacaaggact cccaagtcac 1380  
 ctactcttct gtgaagaaat cataacactt ggaggaatca gaagggaaga tcaacagcaa 1440  
 ggatggggca tcattaagac ttgtataaaa accttatgaa aatgcttgag gcttatcacc 1500  
 tgccacagcc agaacgtgcc tcaggaggca cctcctgtca tttttgtcct gatgatgttt 1560  
 cttctccaat atcttctttt acctatcaat attcatgaa ctgctgctac atccagacac 1620  
 tgtgcaataa aattcttctt gctacctctt ctttaagcaat cagtgtgtaa agatttgagg 1680  
 gaagaatgaa taagagatac aaggctctac ctgcatctac tgtgaagtga tgagaacagg 1740  
 acttgatagt ggtgtattaa cttatattat tgctgctgga tacagtttgc taatattttg 1800  
 ttgagaattt ttgcaaatat gttcattggg aatattggcc tgaaattttc ttttccactg 1860  
 tgtctctgcc agaattgttg tatcaggctg atgctggctt catagaatga gttaggcagg 1920  
 agcccttctt ccttgatttt ttggcatagt ttcagcagga ttggtaccag ttattctttc 1980

|             |            |            |             |             |             |      |
|-------------|------------|------------|-------------|-------------|-------------|------|
| tgcattcttgt | agaattcagc | tatgaatcca | tctgggtctag | ggctttttgtg | ttgggttggtg | 2040 |
| agtttttttat | tactaattca | acttcagcgc | ttgatatttg  | tctaggagg   | gtttctgtct  | 2100 |
| cttcctgggt  | caatcttggg | agattgtgtg | tttccaggaa  | tttagccgtt  | tcctccagat  | 2160 |
| tttctttctt  | atgtgcatcg | acttgagtgt | aaacatnact  | tatatgcact  | gggaaaccaa  | 2220 |
| aaaatctgtg  | tgacttgctt | tattgcagca | tttgttttat  | tttggtagtc  | tggaactgaa  | 2280 |
| cctgcaatat  | caccaaagta | tgcatatagt | tgcaaaaatg  | tgatttttga  | catagtaa    | 2340 |
| atgagtattt  | gcaataaact | atgatattac | ttttgtaagt  | atatagaata  | aaatgtaaat  | 2400 |
| aatctaaaaa  | aaaaaaaaaa | aaaaa      |             |             |             | 2425 |

&lt;210&gt; 22

&lt;211&gt; 1971

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 22

|            |             |             |             |             |             |      |
|------------|-------------|-------------|-------------|-------------|-------------|------|
| tgtaagaagg | ctcatgccat  | tgaccctctt  | aattctctcc  | tgtttggcgg  | agctgacaat  | 60   |
| ggcggaggct | gaaggcaatg  | caagctgcac  | agtcagtcct  | gggggtgcca  | atatggcaga  | 120  |
| gacccacaaa | gccatgatcc  | tgcaactcaa  | tcccagtgag  | aactgcacct  | ggacaataga  | 180  |
| aagaccagaa | aacaaaagca  | tcagaattat  | cttttcttat  | gtccagcttg  | atccagatgg  | 240  |
| aagctgtgaa | agtgaaaaca  | ttaaagtctt  | tgacgggaacc | tccagcaatg  | ggcctctgct  | 300  |
| agggcaagtc | tgcatgaaaa  | acgactatgt  | tcctgtatct  | gaatcatcat  | ccagtacatt  | 360  |
| gacgtttcaa | atagttactg  | actcagcaag  | aattcaaaga  | actgtctttg  | tcttctacta  | 420  |
| cttcttctct | cctaactctt  | ctattccaaa  | ctgtggcggt  | tacctggata  | ccttggaagg  | 480  |
| atccttcacc | agccccaatt  | acccaaagcc  | gcacccctgag | ctggcttatt  | gtgtgtggca  | 540  |
| catacaagtg | gagaaaagatt | acaagataaa  | actaaacttc  | aaagagattt  | tcctagaaat  | 600  |
| agacaaacag | tgcaaatctg  | attttcttgc  | catctatgat  | ggccctccca  | ccaactctgg  | 660  |
| cctgattgga | caagtctgtg  | gccgtgtgac  | tcccaccttc  | gaatcgtcac  | caaactctct  | 720  |
| gactgtcgtg | ttgtctacag  | attatgccaa  | ttcttaccgg  | ggattttctg  | cttccctacac | 780  |
| ctcaatttat | gcagaaaaaca | tcaacactac  | atctttaact  | tgctcttctg  | acaggatgag  | 840  |
| agttattata | agcaaatcct  | acctagaggc  | ttttaactct  | aatgggaata  | acttgcaact  | 900  |
| aaaagaccca | acttggcaga  | ccaaaattat  | caaagtgtgt  | ggaattttct  | gtccctctta  | 960  |
| atggatgtgg | tacaatcaga  | aaggtagaag  | atcagtcaat  | tacttacacc  | aatataatca  | 1020 |
| ccttttctgc | atcctcaact  | tctgaagtga  | tcaccctgca  | gaaacaactc  | cagattattg  | 1080 |
| tgaagtgtga | aatgggacat  | aattctacag  | tggagataat  | atacataaca  | gaagatgatg  | 1140 |
| taatacaaa  | gcaaaatgca  | ctgggcaaat  | ataacaccag  | catggctctt  | tttgaatcca  | 1200 |
| attcatttga | aaagactata  | cttgaatcac  | catattatgt  | ggatttgaac  | caaactcttt  | 1260 |
| ttgttcaagt | tagtctgcac  | acctcagatc  | caaatttggt  | ggtgtttctt  | gatacctgta  | 1320 |
| gagcctctcc | cacctctgac  | tttgcattct  | caacctacga  | cctaatacaag | agtggatgta  | 1380 |
| gtcgagatga | aacttgaag   | gtgtatccct  | tatttggaca  | ctatgggaga  | ttccagttta  | 1440 |
| atgcctttta | attcttgaga  | agtatgagct  | ctgtgtatct  | gcagtgtaaa  | gttttgatat  | 1500 |
| gtgatagcag | tgaccaccag  | tctcgctgca  | atcaagggtg  | tgtctccaga  | agcaaacgag  | 1560 |
| acatttcttc | atataaatgg  | aaaacagatt  | ccatcatagg  | acccattcgt  | ctgaaaagg   | 1620 |
| atcgaagtgc | aagtggcaat  | tcaggatttc  | agcatgaaac  | acatgcgga   | gaaactccaa  | 1680 |
| accagccttt | caacagtgtg  | catctgtttt  | ccttcattgt  | tctagctctg  | aatgtggtga  | 1740 |
| ctgtagcgac | aatcacagtg  | aggcattttg  | taaatcaacg  | ggcagactac  | aaataccaga  | 1800 |
| agctgcagaa | ctattaacta  | acagggtccaa | ccctaagtga  | gacatgtttc  | tccaggatgc  | 1860 |
| caaaggaaat | gctacctcgt  | ggctacacat  | attatgaata  | aatgaggaag  | ggcctgaaag  | 1920 |
| tgacacacag | gcctgcaaaa  | aaaaaaaaaa  | aaaaaaaaaa  | aaaaaaaaaa  | a           | 1971 |

&lt;210&gt; 23

&lt;211&gt; 1130

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 23

|            |            |            |            |            |            |     |
|------------|------------|------------|------------|------------|------------|-----|
| aattcggcac | gagcttgacc | gccacactgg | caggagcagg | acaggacggc | cggacgctgg | 60  |
| ccatggccga | gctcccgagg | ccctttctct | gcggggccct | gctaggcttc | ctgtgcctga | 120 |

|             |            |             |            |             |            |      |
|-------------|------------|-------------|------------|-------------|------------|------|
| gtgggctggc  | cgtggaggtg | aaggtaccca  | cagagccgct | gagcacgccc  | ctggggaaga | 180  |
| cagccgagct  | gacctgcacc | tacagcacgt  | cggtgggaga | cagcttcgcc  | ctggagtgga | 240  |
| gctttgtgca  | gcctgggaaa | cccatctctg  | agtcccatcc | aatcctgtac  | ttcaccaatg | 300  |
| gccatctgta  | tccaactggt | tctaaagtcaa | agcgggtcag | cctgcttcag  | aaccccccca | 360  |
| cagtgggggt  | ggccacactg | aaactgactg  | acgtccaccc | ctcagatact  | ggaacctacc | 420  |
| tctgccaaagt | caacaaccca | ccagatttct  | acaccaatgg | gttggggcta  | atcaacctta | 480  |
| ctgtgctggg  | tccccccagt | aatcccttat  | gcagtcagag | tggacaaaacc | tctgtgggag | 540  |
| gctctactgc  | actgagatgc | agctcttccg  | agggggctcc | taagccagtg  | tacaactggg | 600  |
| tgcgtcttgg  | aacttttcc  | acaccttctc  | ctggcagcat | ggttcaagat  | gaggtgtctg | 660  |
| gccagctcat  | tctcaccaac | ctctccctga  | cctcctcggg | cacctaccgc  | tgtgtggcca | 720  |
| ccaaccagat  | gggcagtgca | tcctgtgagc  | tgacctcttc | tgtgaccgaa  | ccccccaag  | 780  |
| gccgagtggc  | cggagctctg | attgggggtc  | tcctgggcgt | gctgttgctg  | tcagttgctg | 840  |
| cgttctgcct  | ggtcaggttc | cagaaagaga  | gggggaagaa | gccaaggag   | acatatgggg | 900  |
| gtagtgcct   | tcgggaggat | gccatcgctc  | ctgggatctc | tgagcacact  | tgtatgaggg | 960  |
| ctgattctag  | caaggggttc | ctggaagac   | cctcgtctgc | cagcacccgtg | acgaccacca | 1020 |
| agtccaagct  | ccctatggtc | gtgtgacttc  | tcccgatccc | tgaggggcgt  | gagggggaat | 1080 |
| atcaataatt  | aaagtctgtg | ggtacaaaaa  | aaaaaaaaaa | aaaaaaaaaa  |            | 1130 |

<210> 24  
 <211> 1438  
 <212> DNA  
 <213> Homo sapiens

|            |            |            |             |            |             |      |
|------------|------------|------------|-------------|------------|-------------|------|
| <400> 24   |            |            |             |            |             |      |
| ggcacgaggc | ggcatgcccc | ccctccgtca | ccccgcctgg  | ccctgcatct | tctcaactgct | 60   |
| catgggcatc | agcaacggct | acttcggcag | cgtgcccattg | atcctggcgg | caggcaaatg  | 120  |
| gagccccaag | cagcgggagc | tggcaggga  | caccatgacc  | gtgtcctaca | tgtcagggct  | 180  |
| gacgctgggg | tccgcccgtg | cctactgcac | ctacagcctc  | acccgcgacg | ctcacggcag  | 240  |
| ctgcctgcac | gcctccaccg | ccaatggttc | catcctcgca  | ggcctctgag | ccagccccgc  | 300  |
| ccactgccag | ggacgccgag | ggcctgacca | ggggccccga  | ggcctgaggg | cccctcccc   | 360  |
| gtccccacct | cagtgcctgc | ggggccctga | gcctccccct  | gtgccagcag | ccccactccc  | 420  |
| tcagggtcca | gccatgcccc | accctggact | gaagtctctg  | aaagtccctc | gaggaccgga  | 480  |
| acacgtttct | gcgaccggg  | gctctggcca | gcactgtgtt  | ctgcgttttg | tctcatacct  | 540  |
| gcgtctacct | tccatctgtg | tccagcggcc | ccggctccag  | cccagccagc | actctgcagg  | 600  |
| gtcacacgca | ccgtgtcccc | acccaggaca | gcagacaccc  | gccagagtgt | gcgcgcccag  | 660  |
| tgaactgcac | ccggccctca | tcaccacccg | gcactgattg  | gggcaccgcc | tggcccagcc  | 720  |
| tccaccaggg | acccctcctc | atgaactctg | gagccctgag  | aggagagggg | cagcccccca  | 780  |
| ccttgtcacc | ctcagggtct | ccccttctgt | cctcattctt  | agagactgct | tctcccaaac  | 840  |
| ataacgcgtt | agccatgaag | gagtcggagc | cctgggtccc  | aatggaccgc | cctgcgggtct | 900  |
| gcatcagcct | ctgggaaacc | acagcagtga | tgccagctgg  | gcacgtcagg | acctccccac  | 960  |
| acaccacac  | gatgccacag | gtcagggggc | tgtgcctgac  | tagggagccc | tcccattgcc  | 1020 |
| ttcctggccc | gggatagaag | aggggaggtg | agtctggggg  | ctacgaagcc | gggccccccac | 1080 |
| accctggctg | aagtcaagct | gacctaggtc | ttgacctca   | tccagcaagg | gactcgacag  | 1140 |
| acccaagggt | ccctggaacg | tagggagggg | ctgggggtca  | ctccagcccg | ggcctcccag  | 1200 |
| aacaccaggc | ccgtgtgggt | ggcaccctga | ggtcagggga  | tcctaagggt | gtccttccag  | 1260 |
| agacggtgtt | tccaggggga | ggaccgcccc | cgcttccaga  | tccccggccc | cggctgtgac  | 1320 |
| tgcctgtttt | caccctgtct | gtgtcccatc | ccccgtctgt  | ccactaactg | taccgcaccg  | 1380 |
| gccattaaaa | gatgaaggca | gaccgctgca | aaaaaaaaaa  | aaaaaaaaaa | aaaaaaaaaa  | 1438 |

<210> 25  
 <211> 916  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> SITE  
 <222> (499)

<223> n equals a,t,g, or c

<400> 25

|             |             |            |            |            |             |     |
|-------------|-------------|------------|------------|------------|-------------|-----|
| gagcaaaacc  | acactgaaat  | gcatcccact | ccaggagagg | aattcttagc | gtaacactct  | 60  |
| aaataaatgg  | aaggaatcat  | caccttcctt | attttaaccc | tgctttgttc | accaggctgc  | 120 |
| ccagtgcctta | ccatgcagaa  | agcagtcagc | tgtactctgg | aagtttctgt | tcttctttcc  | 180 |
| tggggccttag | gataattctg  | gagctgtctg | agccttgtgc | ctaaggctta | tcagggtgata | 240 |
| taatcttcct  | gttctgggct  | gcttgctgga | ggaataggaa | gtgacattta | taagacacag  | 300 |
| gcggtgtgag  | catccatgtg  | tggctcttgg | ctaaaccagc | tcttgaacag | gttaaagcaa  | 360 |
| acagcaataa  | caaaacaaaa  | actactgatg | ctgagcgttt | tgatcctagt | aatatttcaa  | 420 |
| atattgtcct  | tctgcataatg | tyctatccat | attgattcca | atatmcatta | taagcttctt  | 480 |
| gggtactawt  | ttgctgggnc  | tcttscgtga | argtggtacc | tgtctcatga | tccttaaaag  | 540 |
| agagaggytt  | ttttcatcca  | aagctgtagt | gttgggaact | ggggtgggag | aggcactttt  | 600 |
| tggaattctg  | aaagaatcat  | atctgtgtat | atacactctg | agtggggaag | gatgggggtt  | 660 |
| ggcaggggtt  | gagggaggtg  | ggaacaaaca | gtgagtatgg | gaacaggcag | tcacctcgag  | 720 |
| tgtgggaggt  | cacctgggtc  | cgctgctctt | cttctgtatg | gtgttgggtt | tatgtacaca  | 780 |
| ctataacact  | tctgtgtga   | gttcatgtac | ctgtctgtga | gtgctttggg | gtattgagcc  | 840 |
| tcagtacact  | ccaagggcac  | taaagtcaag | aactagaaaa | aaaaaaaaaa | aaaaaaaaaa  | 900 |
| aaaaaagggc  | ggccgc      |            |            |            |             | 916 |

<210> 26

<211> 2094

<212> DNA

<213> Homo sapiens

<220>

<221> SITE

<222> (2078)

<223> n equals a,t,g, or c

<400> 26

|             |             |             |            |             |            |      |
|-------------|-------------|-------------|------------|-------------|------------|------|
| gaggggtttga | agccgcgcgcg | cgagggagcg  | aggctgcagt | gacagcggcg  | ggcgatcgga | 60   |
| cccaggctgc  | cccgcgtac   | ccgcctgct   | ccgcgcctcc | cgccccagca  | tgacagcccc | 120  |
| ggcggktccg  | cgcggtcag   | agaccgagcg  | gcttctgacc | cccaaccccg  | ggtatgggac | 180  |
| ccaggcgggg  | ccttcaccgg  | ccccctccgac | acccccagaa | gaggaagacc  | ttcgccgtcg | 240  |
| tctcaaatac  | tttttcatga  | gtccctgcca  | caagtttcca | gccaagggcc  | gcaagcctgc | 300  |
| aagctgatgc  | tgcaatgggc  | aagatccctg  | tggtcacggt | gcagctcacc  | ctgtttgggc | 360  |
| tcagtaatac  | gctggctgtg  | acattccggg  | aagagaacac | catcgccctc  | cgacacctct | 420  |
| tctgtctggg  | ctactcggac  | ggagcggatg  | acaccttcgc | agcctacacg  | cgggagcagc | 480  |
| tgtaccaggc  | catcttccat  | gctgtggacc  | agtaacctgg | gttgccctgac | gtgtcactgg | 540  |
| gccggtatgc  | gtatgtccgt  | ggtgggggtg  | acccttggac | caatggctca  | gggcttgctc | 600  |
| tctgccagcg  | gtactaccac  | cgaggccacg  | tggaccgggc | caacgacaca  | tttgacattg | 660  |
| atccgatggg  | ggttactgac  | tgcattccag  | tggatccccc | cgagcggccc  | cctccgscgc | 720  |
| ccagcgacga  | tctcaccctc  | ttggaaagca  | gctccagtta | caagaacctc  | acgctcaaat | 780  |
| tccacaagct  | ggtcaatgtc  | accatccact  | tccggctgaa | gaccattaac  | ctccagagcc | 840  |
| tcatcaataa  | tgagatcccc  | gactgctata  | ccttcagcgt | cctgatcacg  | tttgacaaca | 900  |
| aagcacacag  | tgggcgggatc | cccatcagcc  | tggagaccca | ggccacacac  | caggagtgtg | 960  |
| agcaccacag  | tgtcttccag  | cacggagaca  | acagcttccg | gctcctgttt  | gacgtgggtg | 1020 |
| tcattcctcac | ctgctccctg  | tccttccctc  | tctgcgcccc | ctcactcctt  | cgaggcttcc | 1080 |
| tgctgcagaa  | ygagtttgtg  | gggttcatgt  | ggcggcagcg | gggacgggtc  | atcagcctgt | 1140 |
| gggagcggct  | ggaatttgtc  | aatggctggg  | acatcctgct | cgtcaccagc  | gatgtgctca | 1200 |
| ccatctcggg  | caccatcatg  | aagatcgcca  | tcgaggtcca | gaacttggcg  | agctacgacg | 1260 |
| tctgcagcat  | cctcctgggc  | acctcgacgc  | tgtgtgtgtg | gggtggcggtg | atccgctacc | 1320 |
| tgaccttctt  | ccacaactac  | aataatcctc  | tgcacacact | gcgggtgggc  | ctgcccagcg | 1380 |
| tcatgcgctt  | ctgctgtgtc  | gtggctgtca  | tctacctggg | ctactgcttc  | tgtggctgga | 1440 |
| tcgtgctggg  | gcctatcat   | gtgaagtccc  | gctcactctc | catgggtgtc  | gagtgcctgt | 1500 |
| tctcgctcat  | caatggggac  | gacatgtttg  | tgacgttcgc | cgccatgcag  | gcgcagcagg | 1560 |
| gccgcagcag  | cctggtgtgg  | ctcttctccc  | agctctacct | ttactccttc  | atcagcctct | 1620 |

|             |            |            |            |             |            |      |
|-------------|------------|------------|------------|-------------|------------|------|
| tcattctacat | ggtgctcagc | ctcttcatcg | cgctcatcac | cggcgccctac | gacaccatca | 1680 |
| agcatccccg  | cggcgccagc | gcagaggaga | gcgagctgca | ggcctacatc  | gcacagtgcc | 1740 |
| aggacagccc  | cacctccggc | aagttccgcc | gcgggagcgc | tcgggcctgc  | agccttctct | 1800 |
| gctgctgcgg  | aagggacccc | tcggaggagc | attcgctgct | ggtgaattga  | ttcgacctga | 1860 |
| ctgccgttgg  | accgtagggc | ctggactgca | gagacccccg | cccccgacct  | cgcttattta | 1920 |
| tttgtagggt  | ttgcttttaa | ggatcggctc | cctgtcgcgc | ccgaggaggg  | cctggacctt | 1980 |
| tcgtgtcggg  | cccttggggg | cggggagact | gggtggggag | ggtgttgaat  | aaaagggaaa | 2040 |
| ataaaaaaaaa | aaaaaaaaaa | aaaaaaaaaa | aaaaaacnty | kggggggggc  | ccct       | 2094 |

<210> 27  
 <211> 2076  
 <212> DNA  
 <213> Homo sapiens

|             |             |             |             |             |            |      |
|-------------|-------------|-------------|-------------|-------------|------------|------|
| <400> 27    |             |             |             |             |            |      |
| ccacgcgtcc  | gctccagtcg  | gcgtctcagc  | agtctccggt  | gtccacgcgt  | tgactgccgt | 60   |
| gtgtgactcc  | agtcggcgtc  | tcagcagtc   | ccggtgtcca  | cgcggttgact | gccgtgtgtg | 120  |
| actccagtcg  | gcgtctcagc  | agtctccggt  | gtccacgcgt  | tgactgccgt  | gtgtgactcc | 180  |
| agtcggcgtc  | ttaacagtc   | ccggtgtcca  | tgcggttgact | gccatgtatg  | actccaggtg | 240  |
| ttgagttcat  | cttcaacttc  | tcccaacaat  | gaactggagt  | tttctgtgca  | tgtgtctggc | 300  |
| atgttttcc   | ttagatctag  | tcctaggtgt  | tcgatatgct  | attgaggact  | gtgtattttt | 360  |
| atttcatttg  | tcacctgtgc  | gtggtgcttt  | aatcctgtgc  | cctaaactcc  | cgcttggccc | 420  |
| atggcggtgt  | ttctgtggac  | tcgtgggggt  | tcgtgtgtag  | cacgcgtgtc  | ctctgtctga | 480  |
| cagtggcttt  | gcttccccct  | gtcagtcctgt | gcctcggtct  | ctcactgcac  | tgccgaggtg | 540  |
| agccggcgct  | tgctaactct  | attccagtc   | cggtgaacat  | gggctcagtc  | tttccccgct | 600  |
| cagtgttggg  | tttgactggg  | tgcaacttaca | ggggaagagc  | ttcctcattt  | gctgagggct | 660  |
| tttccctgaat | ccgtgttgaa  | tggttcagtg  | cctttccctgc | acctagttag  | atgctcatga | 720  |
| ggtcacttcc  | ttaccgcatt  | actgtagtga  | attacgctga  | ctttcatatg  | ccaagatgac | 780  |
| ctggcatttc  | aggttaagtc  | ctgtggccat  | gggtgcattgg | ccttttctct  | gcatggccag | 840  |
| atgagatttg  | ctcataccgg  | gctaaggacc  | tcctgtgtag  | gaatgctctt  | gagggacact | 900  |
| gggcttggat  | gttcattgtc  | ttgtcatgtg  | atgtgtgtgt  | catggttgat  | attgcattaa | 960  |
| gtgggcctcc  | tgaaacaagt  | tctgccatag  | tttgtatagg  | attggcatta  | tttgtttcat | 1020 |
| agagatgtga  | tggttgaggc  | catctatgcc  | tgccattttc  | tttttgctta  | ggtttttcat | 1080 |
| taagaacttg  | attttttaaaa | atagacatga  | ggcctggcat  | ggtggctcac  | gcttgtaatc | 1140 |
| ccagcacttt  | gggaggccaa  | cgtggatgga  | tcacctgagg  | tcaggagtgt  | gagaccaacc | 1200 |
| tagtcaacat  | ggtgaaaccc  | cgtctccatt  | aaaaatataa  | aaattagcag  | ggtgtggtgg | 1260 |
| tgcatgcctg  | taatcccagc  | tactctggag  | gctgaggcag  | gagaatcact  | tgaactcagg | 1320 |
| aggtggaggt  | tgcaagtggc  | tgagatcaca  | ccactgcact  | ccagcctggg  | caacagagcg | 1380 |
| aggtctgtgc  | tcaaaaaaaa  | agacatgagg  | cttttggatt  | ttctgtttct  | tcctttgtca | 1440 |
| tttttttaaa  | gatagggttg  | tcgcagaatt  | tcattctaagt | tatcaaaaaca | atttacataa | 1500 |
| atcattcaca  | gtatcctctg  | tgcaagtgat  | tcattctcca  | ttcctgctct  | gggccatttg | 1560 |
| tgttttcttt  | tccccctgat  | cagactagct  | aagagtttat  | cattttttaca | gatattttcc | 1620 |
| ccaaagaaac  | ctactttttg  | gtccattgat  | tttttttttc  | tattgttttc  | tttttcattg | 1680 |
| acttttgcct  | ttttcttatg  | aatttccttt  | ctttctaccta | ttttgtgttc  | aattttgctg | 1740 |
| ccttgtttta  | ggttcttttg  | atagaggctt  | agatcattga  | tgaagaatat  | gaaagaatgg | 1800 |
| gataatacag  | ttaaaaactt  | ggtctactta  | tgcccattag  | agaaaacatt  | cttaagcacg | 1860 |
| catggaatct  | tttaaaaatg  | gacgaggtag  | taggacccaa  | agcaaagtgc  | agtaattcgc | 1920 |
| agatgataat  | gtaattgtata | aatatatgat  | atgtaggtaa  | ataatacaaa  | tcacattctt | 1980 |
| tggccagagt  | gcaactgagg  | aggaaatcag  | taacaaaaag  | acaattaaat  | ccatttgatt | 2040 |
| cttttgaaaa  | aaaaaaaaaa  | aaaaaaaaaa  | aaaaaa      |             |            | 2076 |

<210> 28  
 <211> 1378  
 <212> DNA  
 <213> Homo sapiens

<400> 28

|             |             |             |             |            |             |      |
|-------------|-------------|-------------|-------------|------------|-------------|------|
| ggcagcaggt  | cctttgtgac  | tgatgtcttt  | cacttagcat  | ggtgtttaca | aggttcatcc  | 60   |
| atgttgtagt  | atgtatctac  | ttaatttttt  | tctatgattg  | aataatagtc | catttgtatga | 120  |
| aaatacaaca  | ttttattttat | ctactcatca  | ggtgatggcc  | atgtgggttg | ttttcatcta  | 180  |
| ttggctatta  | ttagtcttct  | gtgaacactc  | atgtataagt  | tttcgtgtgg | atgtatgtat  | 240  |
| tcatttctct  | tgtatacaaat | tctacctggg  | agtggaaattg | ctggatcata | tggcggctct  | 300  |
| tttgacctta  | tggggaactg  | ctagattgtt  | attcaagggtg | tctgcacctt | gttcattatc  | 360  |
| atcagcagtt  | tatgatgggt  | ctgtttcatc  | acaacctcac  | caatacttat | tttctgtctg  | 420  |
| taggtggggg  | ttgttgggac  | accaccacat  | tcattcattt  | acgtattatc | tatggctgct  | 480  |
| tttgacgtac  | agctagagag  | ttgaatagtt  | atggatacag  | actgtatgac | tcaaaaggcc  | 540  |
| caaaatattt  | actaattggc  | ccttcacaga  | aaaagtttgc  | tgctagagg  | atgttataaa  | 600  |
| gtgaagttag  | tcattgttata | tttgaatgcc  | tgggtgaagt  | atgctaatac | aggaataggc  | 660  |
| tagatatctt  | tcgagacttc  | ctaagtggcc  | tcacagaacc  | tatagtcact | taaaccaaag  | 720  |
| tatacttgta  | tggccagtat  | cttagctatg  | caattatata  | tgtagacag  | aaattctatg  | 780  |
| attaaaaaag  | agaggcaatt  | cattgtcata  | atgtgtcatc  | aaaagcatta | taacaaatta  | 840  |
| taaaaatact  | agaaaaggta  | ggtatagtat  | caaaatgata  | aataccagta | aacatgatgc  | 900  |
| tccagaacat  | gtaaaaatata | tattttggag  | tatcatagca  | tagcacgggg | aggggaaaat  | 960  |
| taagtttgca  | agtcaagaat  | agtgtggggg  | agggagtttg  | gagggaaaag | acaagttggg  | 1020 |
| tagacttttg  | aggtacggc   | aggtgctaaa  | tcttagaaga  | atctgcaatg | ctcacttggg  | 1080 |
| tcccagaagt  | agctacaccc  | aagtcaaccc  | ctggcttgtt  | ttccactaac | ggagccaaat  | 1140 |
| acaaactggg  | gtggctacag  | atatggaaaag | ctggtatcaa  | gatcttattt | ttgataagta  | 1200 |
| aaaaggacta  | tacatgagga  | gtgccatcaa  | gatggggatg  | gggtgactgg | gaggaggaag  | 1260 |
| agaaagggtga | gtcagtcag   | cacaaaactt  | aattattttg  | gctcctcagc | agttttgttt  | 1320 |
| gtcaccaagt  | gtgtgtagac  | aaataacatt  | aaatgctctt  | aaaaaaaaaa | aaaaaaaaaa  | 1378 |

<210> 29  
 <211> 1965  
 <212> DNA  
 <213> Homo sapiens

|             |             |             |             |             |             |      |
|-------------|-------------|-------------|-------------|-------------|-------------|------|
| <400> 29    |             |             |             |             |             |      |
| aagccaagct  | tggcacgagc  | aggacatggc  | tcagcttgtg  | cccagaggga  | gagttaagcc  | 60   |
| gctgacctg   | tagccaggga  | gtgcacctgc  | aagcatgggg  | gtggcaggag  | ccacagagct  | 120  |
| ggctgctgag  | aggagctgca  | gatctggaga  | agacagccta  | ggtaaagggtg | gacagtgtga  | 180  |
| gagctgctga  | tgagatagct  | gctgaataaa  | actacatttt  | acctgcctat  | ggcccgccag  | 240  |
| gttttctttc  | agctatcgcc  | catccaccca  | gtcccctcga  | acctcagcat  | gggctggaac  | 300  |
| ctgacctgtg  | gcatgacatt  | tggcatagtt  | gtggacctga  | cacctgtgtt  | tgtcctagtc  | 360  |
| ctgtttctcc  | ctgccttctc  | gttcctctcg  | ctgccctcat  | ggtcactccc  | aagagatcca  | 420  |
| acctatgtta  | agtatgggct  | ggaggactgc  | atgaatgcct  | catgatcttc  | ccagaggcaa  | 480  |
| aggcacctac  | tgccttccaa  | ggtcagtggg  | aggttgggat  | caacactgtt  | tattatgctt  | 540  |
| aggacaaaaa  | agatggggag  | aaagatgtgc  | aaccttacag  | gtcatctttc  | tgggatagaa  | 600  |
| cacaatgggt  | cttctcctgc  | ctcctggata  | tgtagtcaa   | ggccagtcca  | tgctacacat  | 660  |
| ctagtctgac  | ttctaaaata  | gaagcaccag  | atgaattcag  | ccctgagaga  | atthttcagca | 720  |
| gctgtggggg  | cgctggagga  | aacactatta  | aatagttttg  | cacctgagac  | agatagcctc  | 780  |
| actcgcccca  | cctagtcct   | ggtggcattt  | gtctcagggt  | caaaatttaa  | gaaagaaaacc | 840  |
| ttggagtgtc  | cacctgtgtg  | ctgggtagat  | ggctcctaaag | tgggtggttt  | caagcctgag  | 900  |
| tgtgtatcag  | gatcatcagg  | ggagcttgct  | aaagagcagt  | tcctgcggtc  | agaccctcat  | 960  |
| gcattttgag  | cagggtgtgg  | gactgggaaa  | ctgcatctgt  | aacctgctgt  | aatctaacgc  | 1020 |
| ttatctaaat  | actactgtgc  | tcacacagag  | aacaccgcaa  | aagtagagg   | gttcctccag  | 1080 |
| agggcagggtg | agcagatggc  | acagtctgct  | tgggaattcag | tcagggtgatg | agagatgaga  | 1140 |
| tgaggcactc  | ctagcttttg  | gaagaggggag | ctgaaagatg  | aacctttgca  | ggtgcccacg  | 1200 |
| gtcaaaagtgg | tggtttaattg | ccatgccatg  | cccattttct  | gttggcccttg | gcagggagtt  | 1260 |
| acagccctac  | cttaggacct  | ggctccttat  | ttctgtgtga  | ggctcttttc  | tgcctgggcc  | 1320 |
| gagatggagt  | ggaatgagcc  | tagaacatca  | gctaatacat  | gtcctcagaa  | agataaagg   | 1380 |
| ttacattttc  | acccccatca  | aatctgaaag  | ctctctgcct  | gtgtttttct  | aagggatagg  | 1440 |
| gacatcatta  | ctcagtcac   | aacctggact  | catgtagggt  | cccctgtcag  | taaaggagtc  | 1500 |
| agtcaagccc  | accagggtata | ccaaggactc  | ttaccctcag  | cccctactcc  | ttggaaagct  | 1560 |
| gccccttggc  | ctaataattgg | tgttttagctt | gagcctgact  | ccttctcaac  | actaagagct  | 1620 |
| gatgaagtcc  | tgaagcagaa  | agagctctga  | cctgagagtc  | aaacatcctt  | attctgatct  | 1680 |



|             |            |            |            |            |            |      |
|-------------|------------|------------|------------|------------|------------|------|
| cagctcagcc  | cctgatttgt | tgtgtgaccc | tggatatgtc | acttcctgtc | tttttgactt | 1740 |
| ttttaaataga | agggtagact | agaggagagc | ttctaaaact | ttaatgtggt | caacgaaatg | 1800 |
| gaataggaaa  | ttccacaagt | ctgtccttcc | acaaaagcag | caaataaggt | ggcaaaaact | 1860 |
| caaatttatg  | ggaactctgg | aaacgaattg | aaagtttaca | gcaatcaggt | gaatacctaa | 1920 |
| gaataaaaagc | tggatttagt | aagaaaaaaa | aaaaaaaaaa | aaaaa      |            | 1965 |

<210> 30  
 <211> 1473  
 <212> DNA  
 <213> Homo sapiens

|            |             |            |            |            |            |      |
|------------|-------------|------------|------------|------------|------------|------|
| <400> 30   |             |            |            |            |            |      |
| gaattcggca | cgagccgagg  | ctgagggcag | ggggctgctg | cgaaccccg  | ggttccgagg | 60   |
| tggaggggtg | ctatactggg  | atgcaggcgc | ggcggggact | ggcagcaatc | atgccctggg | 120  |
| agctaacgta | gagctttgga  | taatgctttt | gcaagttgta | cgagaaggga | agttctcggg | 180  |
| gtttctgacc | tcctgcagcc  | tcctcttgcc | tcgggctgcc | cagatcttgg | cggctgaggc | 240  |
| tggcttacct | tcgagccgtt  | ccttcatggg | atgtgtgtgt | cccttcacca | acaagcgaaa | 300  |
| ggcttactcg | gagcgtagaa  | tcattgggta | ctcaatgcag | gagatgtatg | aggtggtgtc | 360  |
| caacgtccag | gagtatcgtg  | agtttgtgcc | ctggtgtaag | aagtctctgg | tggatccag  | 420  |
| ccgtaagggt | catttgaaag  | cccagctgga | ggttggcttt | ccacctgtca | tggaaagtta | 480  |
| cacctctgca | gtttccatgg  | tcaaacctca | catggtcaag | gctgtttgta | ctgatggcaa | 540  |
| gctcttcaac | cacttagaga  | ctatttggcg | attcagccct | ggtattcctg | cctatcctcg | 600  |
| aacctgcact | gtggactttt  | cgatttccct | tgaatttcgt | tctctgctgc | actcccagct | 660  |
| ggccaccatg | ttttttgatg  | aggttgtcaa | acagaatgtt | gctgcctttg | agcgtcgggc | 720  |
| agccaccaag | tttgggtccag | aaacagccat | cccccgta   | ctgatgttcc | atgaggtgca | 780  |
| ccagacttga | ggcaagggat  | tgtccctga  | cctcccttct | accccacttc | cctacacaat | 840  |
| tctcttattt | atgttggttt  | gctccgtgtc | caatttgaaa | ggagtctgtg | ttcataatac | 900  |
| tgttttcycc | ctcaatttcc  | cagaaattgg | gttctatgct | ggctggaaat | gttgggggaa | 960  |
| agagaaggca | aaggatgtgg  | aaatgagatg | tgttaggaa  | agggcaggc  | ccatcgtagg | 1020 |
| agcaccatat | gcctgcagcc  | ttttcactac | gaattagaat | aaggactatg | tggttgtctc | 1080 |
| tggaccttat | caagacacct  | tagtgtctga | ccaggggacg | atagtaactt | ttctaaggat | 1140 |
| tgaataaatt | gagcttttct  | tctggcacag | aggtactgag | tggtaagtaa | cttttaccct | 1200 |
| gcctgagatt | cctcaggaga  | aaaggcaacc | tgcctccagc | ctgaaataca | taaagcctca | 1260 |
| ttttaagact | gtaagtccat  | gctgcctggc | tactagagag | caaggggctt | tcttaccacc | 1320 |
| agtgtctagg | agaaaagtac  | tgaacggaaa | cggagtgtgc | tttgtactct | tgagttgtac | 1380 |
| cttattcttc | cacttggcct  | gagtttttat | aaaatttcaa | taaattgtga | cagtgtgaaa | 1440 |
| aaaaaaaaaa | aaaaagatct  | ttaattaagc | ggt        |            |            | 1473 |

<210> 31  
 <211> 1157  
 <212> DNA  
 <213> Homo sapiens

|            |             |             |             |            |            |     |
|------------|-------------|-------------|-------------|------------|------------|-----|
| <400> 31   |             |             |             |            |            |     |
| gagatggatt | ttcttccaaa  | aatgcagacc  | cattttaatt  | aagtttgtaa | ttaaccactg | 60  |
| gggagggcag | gccccctgga  | ttcgggtctgc | tttcggagac  | actatgggag | tcatggccat | 120 |
| gctgatgctc | ccccctgctgc | tgttggaat   | cagcggcctc  | ctcttcattt | accaagaggt | 180 |
| gtccaggctg | tgggtcaaagt | cagctgtgca  | gaacaaagtg  | gtggtgatca | ccgatgccat | 240 |
| ctcaggactg | ggcaaggagt  | gtgctcgggt  | gttccacaca  | ggtggggcaa | ggctgggtgt | 300 |
| gtgtggaaag | aactgggaga  | ggctagagaa  | cctatatgat  | gccttgatca | gcgtggctga | 360 |
| ccccagcaag | acattcaccc  | caaagctggg  | cctgttggac  | ctctcagaca | tcagctgtgt | 420 |
| cccagatgtg | gcaaaaagaag | tcctggattg  | ctatggctgt  | gtggacatcc | tcatcaacaa | 480 |
| tgcagtgctg | aagggtgaagg | ggcctgccc   | taagatttct  | ctggagctcg | acaaaaagat | 540 |
| catggatgcc | aattactttg  | gccccatcac  | attgacgaaa  | gccctgcttc | ccaacatgat | 600 |
| ctcccgagga | acaggccaaa  | tcgtgttagt  | gaataaatatc | caagggaagt | ttggaatccc | 660 |
| gttccgtacg | acttacgctg  | cctccaagca  | cgcagccctg  | ggcttctttg | actgcctccg | 720 |
| agccgaagtg | gaggaatacg  | atgttgtcat  | cagcaccgtg  | agcccgactt | tcatccggtc | 780 |

|            |            |             |             |            |             |      |
|------------|------------|-------------|-------------|------------|-------------|------|
| gtaccacgtg | tatccagagc | aaggaaactg  | ggaagcttcc  | atttggaat  | tcttttttcag | 840  |
| gaagctgacc | tacggcggtg | acccagttara | ggtggcggag  | gaggtgatgc | gcaccgtgcg  | 900  |
| gaggaagaag | caagaggtgt | ttatggccaa  | ccccatcccc  | aaggccgccc | tgtacgtccg  | 960  |
| caccttcttc | ccggagttct | ttttcgccgt  | ggtggcctgt  | ggggtgaagg | agaagctcaa  | 1020 |
| tgtcccgag  | gaggggtaac | tgcaggaggc  | caaatgggccc | accccttgga | aataaaggtt  | 1080 |
| tttctggcaa | aaaaaaaaaa | aaaaaaaaaa  | aaaaaaaaaa  | aaaaaaaaaa | aaaaaaaaaa  | 1140 |
| aaaaaaaaaa | aaaaaaa    |             |             |            |             | 1157 |

<210> 32  
 <211> 2190  
 <212> DNA  
 <213> Homo sapiens

|             |              |             |             |             |             |      |
|-------------|--------------|-------------|-------------|-------------|-------------|------|
| <400> 32    |              |             |             |             |             |      |
| tgcaccacg   | cgteccgggccc | tgcctctcca  | ctcagaggga  | catcagctca  | agagcaatca  | 60   |
| cacaaccccc  | gagaagaaat   | ccaaacctca  | ccttctgttg  | ctgcttctct  | actatcttat  | 120  |
| gggtgcttga  | ctggctctcc   | caagcctgct  | gtcctgcagc  | ctcactgcct  | gtgtcctttt  | 180  |
| ctcaggcagt  | gtgctggcgt   | tccatgcgac  | gtggctgtgc  | agtgtctgga  | gccctggggc  | 240  |
| tgctggccgg  | tgcagggtgt   | ggctcatggc  | tctagtgtct  | gtatctgtgt  | cctgctgcct  | 300  |
| ctcagcccat  | ttccgggacc   | ttgcaggatg  | aggagataac  | tttgagctgc  | tcagaggcca  | 360  |
| gcgtgagga   | agctctgctc   | cctgcacttc  | ccaaaacagt  | atctttcaga  | ataaacagcg  | 420  |
| aagacttctt  | gctggaagcg   | caagtgaggg  | atcagccacg  | ctggctcctg  | gtctgccatg  | 480  |
| agggctggag  | ccccgccctg   | gggctgcaga  | tctgctggag  | ccttgggcat  | ctcagactca  | 540  |
| ctcaccacaa  | gggagtaaac   | ctcactgaca  | tcaaaactcaa | cagttcccag  | gagtttgctc  | 600  |
| agctctctcc  | tagactggga   | ggcttcctgg  | aggaggcgtg  | gcagcccagg  | aacaactgca  | 660  |
| cttctgggtca | agttgtttcc   | ctcagatgct  | ctgagtgtgg  | agcgaggccc  | ctggcttccc  | 720  |
| ggatagttgg  | tgggcagttct  | gtggctcctg  | ggcgctggcc  | gtggcaggcc  | agcgtggccc  | 780  |
| tgggcttccg  | gcacacgtgt   | gggggctctg  | tgctagcgcc  | acgctgggtg  | gtgactgctg  | 840  |
| cacattgtat  | gcacagtttc   | aggctggccc  | gcctgtccag  | ctggcggggt  | catgcggggc  | 900  |
| tggtcagcca  | cagtgcctgc   | aggccccacc  | aaggggctct  | gggtggagagg | attatcccac  | 960  |
| acccctctca  | cagtgcctgc   | aatcatgact  | acgacgtcgc  | cctcctgagg  | ctccagaccg  | 1020 |
| ctctcaactt  | ctcagacact   | gtgggcgtctg | tgtgcctgcc  | ggccaaggaa  | cagcattttc  | 1080 |
| cgaagggctc  | gcgggtgctg   | gtgtctggct  | ggggccacac  | ccaccctagc  | catacttaca  | 1140 |
| gctcggatat  | gctccaggac   | acggtgggtg  | ccttggttcag | cactcagctc  | tgcaacagct  | 1200 |
| cttgcgtgta  | cagcggagcc   | ctcaccccc   | gcattgctttg | cgctgggtac  | ctggacggaa  | 1260 |
| gggctgatgc  | atgccaggga   | gatagcgggg  | gccccctagt  | gtgcccagat  | ggggacacat  | 1320 |
| ggcgccatgt  | gggggtgggt   | agctgggggc  | gtggctgcgc  | agagcccaat  | cacccagggtg | 1380 |
| tctacgccaa  | ggtagctgag   | tttctggact  | ggatccatga  | cactgctcag  | gactccctcc  | 1440 |
| tctgagtcct  | gctgtttcct   | ccagtctcac  | tgcacaccac  | tgctctatgc  | ttcctggggc  | 1500 |
| ctccagcagc  | tccactaatg   | gaggagaggg  | agtagcttcc  | gacacagaac  | gcatggacct  | 1560 |
| cctactactg  | tgtgtgagga   | acagtcacta  | cccactggcc  | agccacccag  | ccaacagggtc | 1620 |
| tctcctcttg  | ggccctgatt   | tcagagtcct  | ctttctcact  | agagactcaa  | tgacagaaga  | 1680 |
| gaggctggga  | cttgggtggg   | catgctgtgg  | ttgatgaggg  | atgaggggga  | ggagagaggt  | 1740 |
| aggagctgga  | gatgaagagg   | ctgctagaag  | cagcaggaag  | cctgcccttc  | tgccctctcc  | 1800 |
| cttccctgcc  | cctgtgtgag   | tcttttggga  | gggtgctggg  | aggtgcccc   | cgtccacact  | 1860 |
| ttttcctgtg  | ctctaggtgg   | gctaagtggc  | tccctagagg  | actccatggc  | tgagaggctc  | 1920 |
| ctgggcagat  | gggggtcaagg  | ctgggcccagc | ccagatgaag  | cctatgggag  | tcaggaccct  | 1980 |
| ctccactctc  | cctctccact   | ccccctccctg | ttctcacctg  | gctgtggctg  | gccctgtgtg  | 2040 |
| gggtgggtac  | actggaaaac   | aagaaggttg  | gagttgggtc  | aggacattgg  | ttttaaatga  | 2100 |
| cagttctgtg  | aactgggtcca  | aggagttctg  | ttattaaagt  | gatatatggt  | cttgggtccaa | 2160 |
| aaaaaaaaaa  | aaaaaaaaaa   | aaaaaaaaaa  |             |             |             | 2190 |

<210> 33  
 <211> 2511  
 <212> DNA  
 <213> Homo sapiens

&lt;400&gt; 33

|             |             |             |             |            |             |      |
|-------------|-------------|-------------|-------------|------------|-------------|------|
| ctgcaggaat  | tccggcagag  | catttttcagg | cctcagtatg  | gtggcttatt | ctgtccaggt  | 60   |
| tctagccgta  | tttatcagct  | gtgcaatatt  | aacccttgca  | atgaaaatag | cttggatttt  | 120  |
| cgggctcaac  | agtgtgcaga  | atataacagc  | aaacctttcc  | gtggatgggt | ctaccagtg   | 180  |
| aaaccctata  | caaaagtggg  | aggtaatttg  | gtctctatga  | cattcaaata | agtctctatg  | 240  |
| tggataataa  | tgtgattgac  | caatacagaa  | gaaattgctg  | cttgtatcaa | agagtttgaa  | 300  |
| tgtgtacctt  | tcactcccca  | gacccatcct  | ggctcagtg   | ttcattccat | gggttttggt  | 360  |
| tatttttcca  | ctgttggttt  | tttttttccc  | cctataagat  | acctcttgct | tcccacatct  | 420  |
| gtaaacccaa  | ggtttcatat  | gtttggaatg  | aactcatggt  | tctcaactta | cctttgacat  | 480  |
| ttggggcaatt | aagtctccca  | gggatcttaa  | ttgaaattgg  | tatgaactgt | ccagaccaa   | 540  |
| aactcatgaa  | accatatata  | ccccatagag  | gcaccgtaca  | cagtaactga | catgtcagtt  | 600  |
| gattacaagc  | atgggaaggc  | ctgtgtgtag  | agtgtgtgca  | tgcacgcaga | cacacacaca  | 660  |
| gaatcataaa  | taaaaattat  | actaggttct  | tgggtacttac | tatacttaaa | gttatggctt  | 720  |
| atattttact  | ttttaaatta  | atgtgtcttt  | attttgactg  | aataataaaa | cattagttac  | 780  |
| agcagaagag  | tttaattgtag | ttgctcttac  | ctatgtagaa  | taagctgtca | tcaccttagt  | 840  |
| tgtttcatta  | cttccatcca  | ttagatttat  | caaaactggt  | acgctgtctt | gaaacagggt  | 900  |
| tatatgtgaa  | tcccaactgc  | ccatgtgtag  | aatggaaaga  | gactaagttt | aatgaacaatc | 960  |
| catgggctgt  | ttgtgtgcaa  | agcgcaacat  | gaacctatat  | taatcagtg  | tcataaagga  | 1020 |
| agctaataata | attacaggca  | tcactataac  | aagtagagcc  | tccaaatcga | aagagaggat  | 1080 |
| tgtgcagctt  | tgtcagtat   | cagcctagcc  | atctcaggag  | cactgatgtg | gttttggttc  | 1140 |
| atgactgttt  | gccaggaagt  | atagatagag  | acagacatga  | caattccaaa | gctgtgtctt  | 1200 |
| aggaggaagt  | aatgagggtac | ctatagaggt  | ttactgtaca  | tgagaaacga | cttacattca  | 1260 |
| aaacttcaaa  | gagctattga  | ataggaagga  | tgttcaattt  | atctcaaatt | gcttttagata | 1320 |
| acagaattaa  | ttcaagggtc  | gagaacattc  | tagccatatt  | gtctcctcag | agagaccttc  | 1380 |
| cttaacagcc  | tgtcaacata  | ttcttccttc  | atattgtttt  | ctgaaccctt | taccccggtt  | 1440 |
| tattcttcat  | agctcttctc  | agtgcattga  | tgtattttta  | tgtggtcatt | tatctgttat  | 1500 |
| cttctctccc  | acaagaattt  | aggttccaca  | aggactaagc  | ctttgtctat | cttgagcttg  | 1560 |
| cttatatctc  | cagcatccaa  | gaacagcact  | tgggtatata  | ttatgtaatt | gttataactt  | 1620 |
| ttgaaatgaa  | tgaataagta  | aataaatatt  | aactgtccaa  | aatgaaaata | tactccctct  | 1680 |
| gtaagtaaca  | agggtcccat  | cactagaggg  | attctaccag  | gagctgagtg | atttcgtagg  | 1740 |
| aagcatgctg  | cacagcagg   | cccagcggat  | gctgcagttg  | cttcttattc | cagacttgga  | 1800 |
| agatttcctt  | tctgttggtt  | gtatactctt  | gaggtoocat  | gcttcttacc | tgtggttctt  | 1860 |
| tctccatgac  | tctgttggtc  | ctccttttac  | ttcctcttct  | gttcttttgc | tttggtttgg  | 1920 |
| cttcgtggat  | attccttggc  | ctttatcaca  | ttacatcttt  | cattcaaaca | tagtggttat  | 1980 |
| gaaatcagtc  | ctgttatcgc  | ccttaaagaa  | attctgtggt  | gaagatataa | ggagaaagtt  | 2040 |
| aaacaaataa  | attttgcaat  | ttagaaaatg  | cttgctgggt  | tcaaagttct | ttcactaatt  | 2100 |
| ttattgcagt  | ttccactgag  | tagggagcat  | gcaatttcat  | tcatgcatgc | aacagatggt  | 2160 |
| tactgaactc  | tttttgtgta  | ggagacactt  | tgtagatgac  | agagcagaat | gcactgaatc  | 2220 |
| aaacatagac  | ctcctgcctt  | aggatcttac  | ctctcagtg   | aggagacag  | aaacgttaag  | 2280 |
| gctttctagt  | ctctccttgt  | ctccttttga  | tacttatatc  | agaggagact | gaccatgact  | 2340 |
| tgaatgtctt  | gtgacattcc  | tgcaatttag  | aagaacaagg  | gaagactttt | tcataaatgt  | 2400 |
| ggacaatctc  | tgtgtacag   | gagtgagggt  | ttttcccgtc  | tttctctgt  | gtttttaatg  | 2460 |
| gactcataaa  | ctcaccagg   | aatctgtgct  | tttaaaaaaa  | aaaaaaaaaa | a           | 2511 |

&lt;210&gt; 34

&lt;211&gt; 1684

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 34

|            |            |            |            |            |            |     |
|------------|------------|------------|------------|------------|------------|-----|
| gaccacgcg  | tccgcgcgcg | cccgcgccag | ttatcatggc | ggctcccttg | gtcctgggtg | 60  |
| tgggtgggtg | tgtgacagtg | cgggcggcct | tgttccgctc | cagtctggcc | gagttcattt | 120 |
| ccgagcgggt | ggaggtgggt | tccccactga | gctcttgga  | gagagtgggt | gaaggccttt | 180 |
| cactgtttgg | acttgggagt | atctccgtat | tctggagcag | tatttcatgg | aaactccatt | 240 |
| aaataaatat | acctctttca | tttcttaatt | gactatgctg | aattgggtgt | tatgataact | 300 |
| gatgcactca | ctgctattgc | cctgtatttt | gcaatccagg | acttcaataa | agttgtgttt | 360 |
| aaaaagcaga | aactcctcct | agaactggac | cagtatgccc | cagatgtggc | cgaactcatc | 420 |
| cggaccctta | tggaaatgcg | ttacatccct | ttgaaagtgg | ccctgttcta | tctcttaaat | 480 |

|             |             |             |             |             |             |      |
|-------------|-------------|-------------|-------------|-------------|-------------|------|
| ccttacacga  | ttttgtcttg  | tgttgccaag  | tctacctgtg  | ccatcaacaa  | caccctcatt  | 540  |
| gctttcttca  | ttttgactac  | gataaaaggc  | agtgccttcc  | tcagtgcctat | ttttcttgcc  | 600  |
| ttagcgacat  | accagtctct  | gtaccactc   | accttgcttg  | tcccaggact  | cctctatctc  | 660  |
| ctccagcggc  | agtacatacc  | tgtgaaaatg  | aagagcaaag  | ccttctggat  | cttttcttgg  | 720  |
| gagtatgcc   | tgatgtatgt  | gggaagccta  | gtggtaata   | tttgccctct  | cttcttccct  | 780  |
| ctcagctctt  | gggatttcat  | ccccgcagtc  | tatggcttta  | tactttctgt  | tccagatctc  | 840  |
| actccaaaca  | ttgggtctttt | ctgggtacttc | tttgagagaga | tgtttgagca  | cttcagcctc  | 900  |
| ttctttgtat  | gtgtgtttca  | gatcaacgtc  | ttcttctaca  | ccatccccct  | agccataaaag | 960  |
| ctaaaggagc  | accccatctt  | cttcatgttt  | atccagatcg  | ctgtcatcgc  | catctttaag  | 1020 |
| tcctaccgga  | cagtggggga  | cgtggcgctc  | tacatggcct  | tcttccccgt  | gtggaacctat | 1080 |
| ctctacagat  | tcctgagaaa  | catctttgtc  | ctcacctgca  | tcatcatcgt  | ctgttccctg  | 1140 |
| ctcttccctg  | tcctgtggca  | cctctggatt  | tatccaggaa  | tgccaactct  | aatttctttt  | 1200 |
| atgccatcac  | actgaccttc  | aacgttgggc  | agatcctgct  | catctctgat  | tacttctatg  | 1260 |
| ccttctctgcg | gcgggagtag  | tacctcacac  | atggcctcta  | cttgaccgcc  | aaggatggca  | 1320 |
| cagaggccat  | gctcgtgctc  | aagtaggcct  | ggctggcaca  | gggctgcctg  | gacctcaggg  | 1380 |
| ggctgtgggg  | ccagaagctg  | ggccaagccc  | tccagccaga  | gttgccagca  | ggcgagtgtc  | 1440 |
| tgggcagaag  | aggttcgagt  | ccagggtcac  | aagtctctgg  | taccaaagg   | gacctatggc  | 1500 |
| tgactgacag  | caaggcctat  | ggggagaaga  | tgggagctcc  | ccaacttgga  | ccccacctt   | 1560 |
| gtggctctgc  | acaccaagga  | gccccctccc  | agacaggaag  | gagaagaggc  | aggtgagcag  | 1620 |
| ggcttggttag | attgtggcta  | cttaataaat  | gttttttgtt  | atgaagtcta  | aaaaaaaaaa  | 1680 |
| aaaa        |             |             |             |             |             | 1684 |

<210> 35  
 <211> 2383  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> SITE  
 <222> (538)  
 <223> n equals a,t,g, or c

|             |             |             |            |             |             |      |
|-------------|-------------|-------------|------------|-------------|-------------|------|
| <400> 35    |             |             |            |             |             |      |
| gagcccacga  | gaggcagcgc  | catggcggag  | cagacctact | cgtgggccta  | ttccctgggtg | 60   |
| gattccagtc  | aagtgtctac  | atttctgatt  | tccattcttc | ttatagtcta  | tggtagttty  | 120  |
| aggctccctta | atatggactt  | tgaaaatcaa  | gataaggaga | aagacagtaa  | tagttcttct  | 180  |
| gggtcttttca | atggcaacag  | caccaataat  | agcatccaaa | caattgactc  | taccaggct   | 240  |
| ctgttcccttc | caatttgagc  | atctgtctct  | cttttagtaa | tgttcttctt  | ctttgactca  | 300  |
| gttcaagtag  | tttttacaat  | atgtacagca  | gttcttgcga | cgatagcttt  | tgcttttctt  | 360  |
| ctcctcccga  | tgtgccagta  | tttaacaaga  | ccctgtctac | ctcagaacaa  | gatttccctt  | 420  |
| ggttgtctgtg | gacgtttcac  | tgctgtctgag | ttgtgtctat | tctctctgtc  | tgctatgctc  | 480  |
| gtcctcatct  | gggttctcac  | tggccattgg  | cttctcatgg | atgcactggc  | catgggcntc  | 540  |
| tgtgtgcgca  | tgatcgccct  | tgtccgcctg  | ccgagcctca | aggctctcctg | cctgcttctc  | 600  |
| tcaggggcttc | tcattctatga | tgtcttttgg  | gtatttttct | cagcctacat  | cttcaatagc  | 660  |
| aacgtcatgg  | tgaagggtgg  | cactcagccg  | gctgacaatc | cccttgacgt  | tctatcccgg  | 720  |
| aagctccacc  | tggggcccaa  | tggtgggcgt  | gatgttcttc | gcctgtctct  | gcctggaaaa  | 780  |
| ctggtctttcc | caagctccac  | tggcagccac  | ttctccatgt | tgggcatcgg  | agacatcgtt  | 840  |
| atgcctgggtc | tcctactatg  | ctttgtcctt  | cgctatgaca | actacaaaaa  | gcaagccagt  | 900  |
| ggggactcct  | gtggggcccc  | tggacctgcc  | aacatctccg | ggcgcatgca  | gaaggtctcc  | 960  |
| tactttcact  | gcacctcat   | cggatacttt  | gtaggcctgc | tcactgctac  | tgtggcgtct  | 1020 |
| cgcattcacg  | gggcgcgccc  | gccccgccct  | ctctatttgg | tgccattttac | tttatttgcca | 1080 |
| ctcctcacga  | tggcctattt  | aaaggggcga  | ctccggcgga | tgtgggtctga | gcctttccac  | 1140 |
| tccaagtcca  | tgacctcccg  | attcctggaa  | gtatgatgga | tcacgtggaa  | agtgaccaga  | 1200 |
| tggcgtcat   | agtccttttc  | tctcaactca  | tggtttgttt | cctcttagag  | ctggcctggg  | 1260 |
| actcagaaat  | gtacctgtgt  | ttaagggaact | gccgtgtgac | tggatttggc  | atttaaaggg  | 1320 |
| agctcgtttg  | caggagagag  | gtgctggagc  | cctgtttggg | tccttctctt  | cctgcggatg  | 1380 |
| tagaggtggg  | gccccctcca  | agagggacag  | gcctctcccc | agcgcgcctt  | cctcccacgt  | 1440 |
| ttttatggat  | ctgcaccaga  | ctgttacctt  | ctgggggaga | tggagatttg  | actgttttaa  | 1500 |

|            |            |            |            |            |            |      |
|------------|------------|------------|------------|------------|------------|------|
| aactgaaaac | agcgaggagt | ctttctagaa | cttttgaaca | ctaaaaggat | gaaaaaaatt | 1560 |
| agcaaaccca | agtttcttca | atgacccctc | gagaactttg | ggaccagttt | cctatrgggg | 1620 |
| actcagtttc | agagaactga | gacagaagct | cttctgtcgt | tatatctctc | tttccttttt | 1680 |
| ttggatttat | taaatatatt | ctgtgggtgt | aatgacttta | ttaaatccac | agacattgag | 1740 |
| tgacttctta | caacatccac | ataagrattt | gttgtaatga | gttcatgtcc | accagatgt  | 1800 |
| tgtgttgcca | gtgaacaagg | gcacgggttt | tatacatatg | tacatatata | tatataaaca | 1860 |
| cacacataga | tatatatgaa | taaacaaaaa | tgaatcctg  | ctaagatcac | gctgtgtagc | 1920 |
| tgacaggggc | ttgctgtcgt | tttgagcatg | togagcagtt | tactgtggct | tccttgtata | 1980 |
| tggataagct | gctgtccttc | cccttcacaa | ctgaccccg  | agttacaaac | tagtatagca | 2040 |
| tttgtgctga | ttgatgatag | actcatggac | ttcaggagcc | cttacttggg | tttgatcagt | 2100 |
| gtagcaaat  | agggatgaag | agttcaaac  | ttttggccct | ttctttcttt | tctaggcttc | 2160 |
| tccctcgcag | gggtgtccgt | agtttctct  | cgagccaatg | catgtattat | agcagcaggt | 2220 |
| gtctttgtgc | tttctcatca | tagtaacgta | ctacttgtaa | atacattttt | ctattttcta | 2280 |
| tttttttgta | tttttttttg | acattttgtt | tcattgggtg | gctgtatatt | ttccatgccc | 2340 |
| tcactccttt | aagaaaaaaa | aaaaaaaaag | aaaaaagcaa | cac        |            | 2383 |

&lt;210&gt; 36

&lt;211&gt; 1815

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 36

|            |            |            |            |             |            |      |
|------------|------------|------------|------------|-------------|------------|------|
| cacgcgtccg | cggacgctgg | gctcaatctc | ctgaccttgt | gatctgccc   | cctcggcctc | 60   |
| ccaaagtgtc | gggtttacag | gcatgagcca | cagcgcccg  | ctgagtattg  | ggctctttag | 120  |
| ggtaaaaact | tttgatcttt | gcttgaggtt | tttgtttttt | tctcttttac  | actctccctg | 180  |
| ttccctgatt | aaatgaaggc | caggcttgcc | tagttccagg | gaaaaggccc  | agggtgccta | 240  |
| gagcaagggt | gatgggactt | tgttcgcaga | tgggccttga | gagagcgacc  | cctcgctcct | 300  |
| aaatgcccgg | aggaaggagc | ggacttcttt | atctttacca | tgggtattct  | gccttactgc | 360  |
| tttggcctgt | ggcgcttctt | cacttgcttt | tcctcatctt | gcttggaatg  | tgctttgcct | 420  |
| gttgcatacc | cacctcgctt | gcccccttgc | acaactccat | gctggcctaa  | aagcccagtc | 480  |
| tgctgtcctg | tgccctttag | acttccactg | taggattatg | tttccacact  | ccctgtggac | 540  |
| tgtgccactg | gagctctctg | cagacaggga | ctgtgtcagg | ttgacctcca  | tccttcagac | 600  |
| cagcccagtg | cctggcaggt | agaggaaaag | gaagctgagg | aaggacttgc  | tgcaaaagt  | 660  |
| gatgccagga | gctctggtct | tcccttcttg | aatctgtctc | cttatgatgg  | gagggacaca | 720  |
| gggctgtgct | ggatttgtgc | acgatgcttt | ggacagccca | tgggagaggg  | ccaggaggaa | 780  |
| ggaaaccag  | actgagtggg | tagcaggctg | gatgggggca | ttgacagtgg  | gggaagcatt | 840  |
| aaaggccatt | tatagccttc | acaggctctt | gtaatgggct | cttacacggg  | ttgggtggcg | 900  |
| aaggacacag | gtggacctgg | gctgggtggt | actcctgggc | tgctcttggc  | cctggcatct | 960  |
| gagacctgtt | ggccaaaagg | tttgatgtgg | ctctgggtat | ttttcttttt  | tttgagaatg | 1020 |
| gaactttttt | tttttttaag | aaatgctctt | ttgaataggc | aatacagtca  | cgtttctaaa | 1080 |
| atgaaaatat | attaaaatat | atttttaaga | attttgcccc | tcactcctga  | tctcatctct | 1140 |
| gtcctccctc | ctccctggta | accacctgta | gcagtttgaa | tacccttcta  | gtttttctta | 1200 |
| atgcaagtac | agcaaacaca | aattgtgtat | tattatttct | cccttttcag  | taaatgaaag | 1260 |
| atagcattct | gtgtgtactg | ttcttcatct | tgtgtctttt | ttaaacttatt | gtagagattt | 1320 |
| ttccatatca | gtgcatggag | aatgggtgtc | attctctttc | agctgtgttg  | cactgtgaag | 1380 |
| ttgtccctgt | ttgaatactc | acccctgagg | aaaggcacct | ggctgtttcc  | agcttgtttc | 1440 |
| atgacatgcc | ggcgacagtt | gtctcacgtg | cacatcgttt | cccacattgc  | agtggctcct | 1500 |
| cagggtggca | tcccgcaggc | acattgctga | gtcaaagagg | aaacacagtt  | gtaattttga | 1560 |
| cagattttgc | ccagttgccc | tctacagggc | ttgttccatg | ttgcaactcc  | actggcggtg | 1620 |
| ttgatgcctg | attccccact | gactcgtcaa | cacaagggtg | agtcaaatgc  | ttggagtctt | 1680 |
| gccagcctga | ccaacatgga | gaaaccctac | tgaggatata | aagtttagcca | ggcatgggtg | 1740 |
| tgcatgcctg | tagtcccagc | tgctcaggag | cctggcaaca | agagcaaaac  | tccagctcaa | 1800 |
| aaaaaaaaaa | aaaaaa     |            |            |             |            | 1815 |

&lt;210&gt; 37

&lt;211&gt; 1466

&lt;212&gt; DNA

<213> Homo sapiens

<400> 37

|            |             |            |             |             |             |      |
|------------|-------------|------------|-------------|-------------|-------------|------|
| acctgcaggt | accggtccgg  | aattcccggg | tcgacccacg  | cgtccgagcc  | gtccgcgctc  | 60   |
| cgaacggcgc | ctcccgcgcc  | accatgggca | acagcgcgag  | ccgcaacgac  | ttcgagtggg  | 120  |
| tctacaccga | ccagccgcac  | acgcagcggc | gcgcgcggcc  | ccctgccaaag | taccgcggcca | 180  |
| tcaaggccct | gatgcggcca  | gacccgcgcc | tcaagtgggc  | ggtgctggtg  | ctgggtgctgg | 240  |
| tgcagatgct | ggcctgctgg  | ctggtgcgcg | ggctggcctg  | gcgctggctg  | ctgtttctggg | 300  |
| cctacgcctt | tgggtggctgc | gtgaaccact | cgtgacgct   | ggccatccac  | gacatctcgc  | 360  |
| acaacgcggc | cttcggcacg  | ggccgtgcgg | cacgcaaccg  | ctggctggcc  | gtgttcgcca  | 420  |
| acctgcccgt | gggtgtgccc  | tacgcgcct  | ccttcaagaa  | gtaccacgtg  | gaccaccacc  | 480  |
| gctacctggg | cggcgacggg  | ctggacgtgg | acgtgcccac  | gcgtctggag  | ggctggttct  | 540  |
| tctgcacgcc | cgcccgcgaag | ctgctctggc | tgggtgctgca | gcccttcttc  | tactcactac  | 600  |
| ggcgcgtctg | cgteccacccc | aaggccgtga | cccgcattga  | ggtgctcaac  | acgctgggtgc | 660  |
| agctggcggc | cgacctggcc  | atctttgccc | tttgggggct  | caagcccgtg  | gtctacctgc  | 720  |
| tggccagctc | cttctctgggc | ctgggcctgc | accccatctc  | gggccacttc  | gtggccgagc  | 780  |
| actacatgtt | cctcaagggc  | cacgagacct | actcctacta  | tgggcctctc  | aactggatca  | 840  |
| ccttcaatgt | gggctaccac  | gtggagcacc | acgacttccc  | cagcatcccc  | ggctacaacc  | 900  |
| tgcgcgtggt | gcggaagatc  | gcgcccagat | actacgacca  | cctgccgcag  | caccactcct  | 960  |
| gggtgaaggt | gctctgggat  | tttgtgtttg | aggactccct  | ggggccctat  | gccaggggtga | 1020 |
| agcgggtgta | caggctggca  | aaagatggtc | tgtgagcccg  | ggctgcctcc  | tgggtgggtgc | 1080 |
| cattgtcccc | categgcccc  | tcagccttgc | accccagcac  | tgagaagcta  | catttccttc  | 1140 |
| ctgtgctctg | gactgctgcc  | cttgtccccc | aggagtgtcc  | cgcgagcca   | cacctggcaa  | 1200 |
| cagcagtggt | ggctgcaggg  | ctccgtctgc | acgtggactt  | gccttgacc   | ttgagtgtgg  | 1260 |
| ccctcccttt | ctgggcctcc  | ccaggtgagg | cctggccctg  | ccccaccatg  | acctgggtgc  | 1320 |
| tctgagccca | cggttcccac  | ggagctgact | tctccggggt  | gcctgtgccc  | tacattaaac  | 1380 |
| ccggcgtttg | tttcacaaaa  | aaaaaaaaaa | aaaaaaaaaa  | aaaaaaaaaa  | aaaaaaaaaa  | 1440 |
| aaaaaaaaaa | aaaaaaaaaa  | aaaaaa     |             |             |             | 1466 |

<210> 38

<211> 1126

<212> DNA

<213> Homo sapiens

<220>

<221> SITE

<222> (206)

<223> n equals a,t,g, or c

<220>

<221> SITE

<222> (1059)

<223> n equals a,t,g, or c

<220>

<221> SITE

<222> (1077)

<223> n equals a,t,g, or c

<400> 38

|             |             |             |            |            |             |     |
|-------------|-------------|-------------|------------|------------|-------------|-----|
| ctgcaggaat  | tcggcacgag  | gaactagggt  | ttcagtttct | ccacatcctt | gccaacactt  | 60  |
| gttattttct  | gggtattttt  | gataatagcc  | ttcctcatgg | atatgaagtg | gtttctcatt  | 120 |
| gtagttttga  | tttgcatctc  | cctaattgact | agtgatattg | agcatctttt | catgtgccta  | 180 |
| ttgccttttc  | atgtatcttc  | tttggnsaaa  | tgtctattca | agtcctttgc | tcattttttca | 240 |
| gtttggttgt  | attttgttgt  | tgagtttttg  | ttctctacat | attctggata | ttaaatcctt  | 300 |
| attaaaagata | tgattttgcaa | atattttctc  | ccatcctatg | ggttgctttt | ttactctggt  | 360 |
| gactgtgtct  | tttgatgcac  | aaaatttttt  | aattttcatg | aagtctaatt | ttctattttct | 420 |
| cttttggtgc  | cattttccaag | aaatcactgc  | caaatccaat | gttgtgaaat | tttgccattt  | 480 |

|            |             |             |             |            |             |      |
|------------|-------------|-------------|-------------|------------|-------------|------|
| ttttccctaa | tagtttttatt | gcttttaggtt | ttacatttag  | gtcttttcac | cattttggagt | 540  |
| tcattttttt | acatgacatt  | aggtaaggg   | ccaaccacat  | tattctgcat | gtggatatcc  | 600  |
| agtttttcca | gcactacttg  | ttgttgaaaa  | ggactgtaag  | gtcttggcac | ccttatcaaa  | 660  |
| agctatttga | gactagatgt  | ggtggtatgt  | gcatgtaatt  | ccagcttcct | gggaagctga  | 720  |
| ggcaggaaga | ttgctggagc  | ccaggagttc  | aaaaccagcc  | tggacaacct | aaggagaccc  | 780  |
| tctcaaaaaa | aaaaagaaga  | aagaaagaaa  | aagaaaaggt  | gaccaggcac | agcggstcat  | 840  |
| tcccctgkaa | tcccagcact  | ttgggaggct  | gaggcaggcg  | gatcagttga | ggccaggagt  | 900  |
| tcaagaccag | cctggscaac  | ataaccaaac  | cccaacccca  | tctctactaa | aaatacaaaa  | 960  |
| attagctgga | tatggtggca  | tgcacctgta  | tttccageta  | cttgggagac | tgaggcacaa  | 1020 |
| gaatcacttg | aacctgggag  | gcagagggtg  | cagtgaagcna | aaatcgggcc | actgcantcg  | 1080 |
| agcctgggca | acagagcaag  | actccaactc  | aaaaaaaaaa  | aaaaaa     |             | 1126 |

&lt;210&gt; 39

&lt;211&gt; 2558

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 39

|             |             |             |             |             |             |      |
|-------------|-------------|-------------|-------------|-------------|-------------|------|
| ggcagcagct  | gggattacag  | gcgtgagcca  | ccgcgccccag | cctaaagtgt  | tgattttttat | 60   |
| ggcaaatggg  | cccttcctct  | taatggcccg  | gggggagatc  | tgtgtgatag  | ctggtgttag  | 120  |
| gaaaggtctg  | agatggagac  | attcagtgac  | gtcagcttcc  | tgaatgcca   | ccctcctgtg  | 180  |
| ctgtttcttg  | ctggcactgg  | gatgaggaca  | tggctctggt  | gtggctgtgt  | tttctcaatt  | 240  |
| ctgtttgagg  | atltgggggtg | agtcgtgctc  | ccccctctgc  | tcctcctttg  | gaagagaatg  | 300  |
| cccaggacag  | tgggtgccagt | ttcaggtaca  | gaaaaacaaa  | aatagcgctc  | ttttggactc  | 360  |
| agttctctgt  | cacttccagt  | ttgtgagggg  | acagggtat   | gactcagctt  | ggcaaagcca  | 420  |
| ggaatggagt  | gttgtagtaa  | gagcttagca  | gcgtgctttg  | ggctttgagc  | tctgaactta  | 480  |
| agaggagacc  | tcagttcagt  | ctacacaggc  | ttcttacctc  | aggtgagtca  | ctttgctggg  | 540  |
| gtctctgggc  | cagagggtcaa | ggctgcccc   | atgagggctt  | tggactctga  | gggtgtggcg  | 600  |
| ttatgtgtgt  | attagcaaaa  | tgctgggtgtg | cctgggagct  | ttggggcaat  | gctcaccagc  | 660  |
| tcctgagttc  | tcgggagtg   | agtttgggag  | tggatgcctc  | ttgcattctg  | agcctctcac  | 720  |
| tcctgtgtct  | ttcctcttgc  | ccttcagatg  | tttgcgtaca  | gccatttctc  | tcccgaactg  | 780  |
| tctgccagcc  | cagactgacc  | tgtctgcttc  | tcctgctcag  | cgcccagagc  | accctgtctg  | 840  |
| tttatgcctg  | gggccgggtt  | taactgggtc  | cccagtccca  | tgtcacacac  | acctgttccc  | 900  |
| tttggtcttag | ctgcagtgtc  | acctctcgtc  | cctgtttcct  | tcctctctat  | gaggctgaaa  | 960  |
| gtcaatgtta  | cttgagagata | cagcactcca  | cagcctacag  | tcattgtctca | tttaatcttt  | 1020 |
| gcagggagtg  | cgtgaggtca  | gtaggtaggc  | attatctgtc  | tcattttaca  | aatggaggac  | 1080 |
| ctgcagccca  | gagaggtgtg  | atltgcccac  | agacacacag  | ctgctctgct  | attgagcaca  | 1140 |
| gccagtcctg  | aatcaagggt  | cctccagcat  | tgggtccatca | ttccctgtga  | aatgttagtg  | 1200 |
| caggctgggc  | ttgggtggctc | aggcccgtaa  | ttccagcact  | ttcgggggct  | gagacgggag  | 1260 |
| gattgggggtc | aggagttcaa  | gaccagcctg  | ggcagcatag  | caagatccta  | gctttacaaa  | 1320 |
| aacaaacaat  | aacaacaaac  | aaaatggtaa  | ttcataggca  | tgagttaacc  | acatatgggg  | 1380 |
| tggggatgcc  | ctagcctcac  | aatggcccta  | tgagggcttt  | ggactctgaa  | agcgaagtca  | 1440 |
| ggtgcggtgt  | tgtgtgtacc  | tgtggtccca  | gctgctcagg  | atgctgaggc  | tgaggcagga  | 1500 |
| ggccaagact  | gcagtgagcc  | atgatcctag  | cactgcactc  | cagcctgggc  | tggagtaaga  | 1560 |
| ccttgtctca  | aggaggggtg  | gggcttgaaa  | gcgggccctg  | ggccccacct  | cctcacatcc  | 1620 |
| ccagtccctg  | atagcaccat  | catgtgggctg | atgcctgtgt  | aaccccaagc  | tgtatcataa  | 1680 |
| agctggacaa  | caaagacagc  | tccttgggg   | ccactgtaat  | ggaccaaggt  | ctgtgcgtcc  | 1740 |
| ttcctttcca  | catcccccta  | aagttgacaa  | cagtagtaca  | tggcacgatg  | gatgttgtct  | 1800 |
| tggcagggag  | cttataactc  | agcttagggc  | agatccagga  | gggcaggtca  | gtccttgagg  | 1860 |
| atgggcagca  | gggaccgagg  | agggcccttg  | gcgtccccc   | accttcgttt  | ttctcacc    | 1920 |
| ggggataaagg | ctcagaggcg  | gtgccaggga  | aaggccact   | ttgggacctac | tcacagcagc  | 1980 |
| gatattgccca | ctttccagag  | gtgggtgaact | gattccctag  | caaccagggg  | ccctgcctga  | 2040 |
| gtaggtcaca  | gcatgtcatc  | ggctcctcag  | gaaagaggaa  | gactgctcag  | ctggagctcg  | 2100 |
| ggaccatgaa  | ggcaggtgtg  | tgtgtggctc  | tcaggcactg  | tcctccccag  | cccacctccc  | 2160 |
| agggtctgaa  | cttagtgaca  | gggaaaagca  | gggtgcagga  | cagcgatgct  | tcccaaagcc  | 2220 |
| acctgcagg   | ttgggtgctg  | aagttaccag  | atggcaccag  | gctggccgtg  | ggctcacaat  | 2280 |
| gacctctctt  | cctagctgga  | acttccagg   | tcctgtgttg  | aaaggaagtg  | tccagaggac  | 2340 |
| acagcagctg  | agcaaggggc  | ccacctctg   | ttccctccat  | cttttactct  | gcatttctat  | 2400 |

```
accttcactc tggagggctg ggtgggagga catggcttcc ttttagtctt ctggtagaag      2460
catggatgca aacaccttcc ttgagtttcc atgagcatag ctgccacagg ctgacctttc      2520
caaaagacat tactaaatat aaaaaaaaaa aaaaaaaaaa                        2558
```

```
<210> 40
<211> 1939
<212> DNA
<213> Homo sapiens
```

[illegible]

```
<210> 41
<211> 1229
<212> DNA
<213> Homo sapiens
```

[illegible]



|             |            |             |            |             |             |      |
|-------------|------------|-------------|------------|-------------|-------------|------|
| ccttccgggc  | cctgcagggc | tgtggggctg  | tgggggaccg | gggtctgttt  | gcactgtacc  | 480  |
| ccaaaaccaa  | caaggatggc | ttccgcagcc  | gcctgcccgt | ccctggggccc | cggcggcgta  | 540  |
| atccccgcac  | cacccaacac | ccattagctc  | tgttggcaag | ggtctgggtc  | ctgtgcaagg  | 600  |
| gctggaactg  | gcgtctggca | cgggccagcc  | agggtttagc | atcccacttg  | ccccgtggg   | 660  |
| ccatccacac  | actggccagc | tggggcctgc  | ttcgggtga  | acggcccacc  | cgaatcccc   | 720  |
| ggctactacc  | acgcagccag | cgccagctag  | ggccccctgc | ctcccgccag  | ccactgccag  | 780  |
| ggactctagc  | cgggcggagg | tcacgcaccc  | gccagtcccc | ggccctgccc  | ccctggaggt  | 840  |
| agctgactcc  | agcccttcca | gccccaaatct | agagcattga | gcactttatc  | tcccacgact  | 900  |
| cagtgaagtt  | tctccagtcc | ctagtccctc  | cttttcaccc | accttccctca | gtttgtctac  | 960  |
| ttaccccagg  | cccagccctt | cggacctcta  | gacaggcagc | ctcctcagct  | gtggagtcca  | 1020 |
| gcagtgcactc | tgtgttctcc | tggcgctcct  | cccctaagtt | attgctgttc  | gcccgtgtg   | 1080 |
| tgtgtctatc  | ctcaccttca | ttgactcagg  | cctggggcca | gggggtgggtg | aggggtgggaa | 1140 |
| gagtcatgtt  | ttttttctcc | tctttgatct  | tgtttttctg | tctcccttcc  | aacctgtccc  | 1200 |
| ttccccccac  | caaaaaaaaa | aaaaaaaaa   |            |             |             | 1229 |

<210> 42  
 <211> 1897  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> SITE  
 <222> (35)  
 <223> n equals a,t,g, or c

<220>  
 <221> SITE  
 <222> (406)  
 <223> n equals a,t,g, or c

|             |            |             |            |             |             |      |
|-------------|------------|-------------|------------|-------------|-------------|------|
| <400> 42    |            |             |            |             |             |      |
| ccaccgacgg  | tggacggacc | gctrcragc   | aactnagtgg | atcccccg    | ctgcaggaat  | 60   |
| tgggcacgag  | cctccctgca | actaagtttt  | tcctggggaa | aaagcctgca  | gaccaggaag  | 120  |
| tgggaggtgt  | ctggtgggac | actgccctca  | aaaggagcct | ttctgagtgc  | tggggcttca  | 180  |
| tctgccaggg  | ctgcacctca | gcaggcagtg  | ggctcccaga | gctggctgca  | gtaaccgcga  | 240  |
| ggctgtgccg  | gcaggatgtg | gtctttgggt  | tctgtttctg | ttttagtctc  | gacttgtgcc  | 300  |
| gtggatgtgg  | ctgagggcct | aggggtgggga | gaagtctcca | cagggtgggat | tgaactcccc  | 360  |
| aggcacatgg  | tccttgtggg | gctggtggag  | agagagtccc | agaggnttcg  | gacatgtctc  | 420  |
| gttaaaacct  | tttcctcaag | gtgataggta  | cgtgtcaagg | tgaccctgtg  | ccgccatccg  | 480  |
| gcaggctgga  | agaagccggt | aagatggaca  | gatcagggag | gggtggaggg  | tcccgtttgt  | 540  |
| gaaggagctg  | gggaggggga | ggcaaggctg  | agcacagcag | cccactgtga  | tgctctcagt  | 600  |
| gcagaggccc  | cggggggaga | cccagggggg  | caccccccaa | aaccacacca  | tacagtga    | 660  |
| ttcagttccc  | ccactcctgc | cctttcactt  | ctcctcggct | gcctggctgc  | ctcacagggt  | 720  |
| gtcagcttga  | gcaagggccc | aagcggcctc  | tactcagaga | ccctgggtgg  | cagaggggag  | 780  |
| tggggaaggt  | ggacatgggc | atcagcacag  | accagcacct | ctgggtccatc | ctgcctgggc  | 840  |
| atccacaggg  | gagtgccagc | tcccaccccc  | agccacatac | tgktctcagc  | ttctgagtgg  | 900  |
| ctgggctgtc  | ccagagggcc | atgctgggcc  | tgagtgtctt | ccttgggcat  | atgcagatgg  | 960  |
| tgttgtatcc  | agggggtttt | cagggaagct  | ttagcacttt | catattaaaa  | caaaaaatgt  | 1020 |
| tggaaatctcc | attaaatagt | caagtcttag  | ggatagtagt | aaaaacatgg  | ctgtacatgg  | 1080 |
| ctggccaggc  | acagtggctc | acgcctataa  | tcctagcact | ttgggaggct  | gaggtgggag  | 1140 |
| ggttggccaa  | gagcttgaga | ccagcctggg  | caacatagca | agaccctgtc  | ctacttgatt  | 1200 |
| ttttttttta  | aagtacatgg | caaagggcat  | tataaagtaa | gatttgtatt  | agcttgtagc  | 1260 |
| tggttactga  | tgttcatagg | aagggcctca  | accataataa | tggtgaaata  | ataaaatgag  | 1320 |
| atgaataaat  | attagagagg | tagaatagta  | cgtagaaagg | tttagcacac  | attttgtttt  | 1380 |
| tctgcacgag  | tggttgttct | ctgctttcaa  | agtgtgaaa  | cgaatgtcct  | acattgtctg  | 1440 |
| ccttccatga  | ggttctgacc | gcccttgaga  | acagatgtac | ccactacagg  | gtgaagggtga | 1500 |
| gaatgtaatt  | tgaagctgaa | tgagaatgga  | gctggattct | aaaattatat  | cccctctcag  | 1560 |
| attcacaagt  | gttcacacat | ttaggcaaga  | agccctaagt | cctaaccctg  | gacatgtgga  | 1620 |

|            |            |            |            |            |            |      |
|------------|------------|------------|------------|------------|------------|------|
| ttgtccagga | ccatcccaga | cttttgtggc | tggattaatc | agacctgagc | aaactggatg | 1680 |
| caaagaggag | ggggtaggtt | ccgggaaggg | gccctgggtg | ccaggggtgg | atgagtgtct | 1740 |
| ggtgctgagc | ccagagccca | ggcccttgca | atgtttttct | tggatctgct | gggggcagtt | 1800 |
| taagctaata | aaagcctcct | cttttattcc | cagggacaca | tggaagctgc | ctcgtgccga | 1860 |
| attcgatata | aagcttatcg | ataccgtcga | cctcgag    |            |            | 1897 |

<210> 43  
 <211> 1796  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> SITE  
 <222> (417)  
 <223> n equals a,t,g, or c

|            |  |
|------------|--|
| <400> 43   |  |
| tcgacccacg | cgcccgccag attctggagg cgaagaacgc aaagctgaga acatggacgt 60    |
| taatataccc | ccactccgcg cctgggaagca tttcttcccg gggtccgacg gctttgcccg 120  |
| gccggacttc | agggacattt ccaaattggaa caaccgcgta gtgagcaacc tgctctatta 180  |
| ccagaccaac | tacctgggtg tggctgccat gatgatttcc attgtggggg ttctgagtcc 240   |
| cttcaacatg | atcctggggag gaatcgtggg ggtgctgggt ttcacagggg ttgtgtgggc 300  |
| agcccacaat | aaagacgtcc ttccgcccga gaagaagcgc taccacacga cgttcgttat 360   |
| ggtggtcacg | ttggcgagct atttcccttat ctccatgttt ggaggagtca tggctctntgt 420 |
| gtttggcatt | acttttccct tgcgtgtgat gtttatccat gcatcggtga gacttcggaa 480   |
| cctcaagaac | aaactggaga ataaaatgga aggatagggt gaagaaggac accgatgggc 540   |
| atgtcctgga | tgcctagaac agcaggaaga aggcataaac agactcactg actatatcag 600   |
| caaagtgaag | gaataaacat aacttacctg agctagggtt gcagcagaaa ttgagttgca 660   |
| gcttgccctt | gtccagacct atgttctgct tgcgtttttg aaacaggagg tgcacgtacc 720   |
| acccaattat | ctatggcagc atgcatgtat agggccgaact attatcagct ctgatgtttc 780  |
| agagagaaga | cctcagaaac cgaaagaaaa ccaccaccct cctattgtgt ctgaagtttc 840   |
| acgtgtgttt | atgaaatcta atgggaaatg gatcacacga tttctttaag ggaattaaaa 900   |
| aaaataaaa  | ag aattacggct ttacagcaa caatacgatt atcttatagg aaaaaaaaaa 960 |
| tcattgtaaa | gtatcaagac aatacgagta aatgaaaagg ctgttaaagt agatgacatc 1020  |
| atgtgttagc | ctgttcctaa tcccctagaa ttgtaatgtg tgggatataa attagttttt 1080  |
| attattctct | taaaaatcaa agatgatctc tatcactttg ccacctgttt gatgtgcagt 1140  |
| ggaaactggt | taagccagtt gttcatactt cctttacaaa tataaagata gctgtttagg 1200  |
| atattttgtt | aaatttttgt aaatttttga aatgctagta atgtgttttc accagcaagt 1260  |
| atltgttgca | aacttaattg cattttccct aagatgggta cagctatgta acctgtatta 1320  |
| ttctggacgg | acttattaaa atacaaacag acaaaaaata aaacaaaact tgagtcttat 1380  |
| ttaccttgca | cattttttgt tgttacagtg aaaaaaatgg tccaagaaaa tgtttgccat 1440  |
| ttttgcattg | tttcgttttt aactggaaca ttttagaaga aggaaatgaa tgtgcatttt 1500  |
| attaattcct | taggggcaca aggaggacaa taatagctga tcttttgaaa tttgaaaaac 1560  |
| gtcttttagt | gaccaagcaa aaagacttta aaaaatggta atgaaaatgg aatgcagcta 1620  |
| ctgcagctaa | taaaaaattt tagatagcaa ttgttacaac catatgcctt tatagctaga 1680  |
| cattagaatt | atgatagcat gagtttatac attctattat ttttccctcc tttctcatgt 1740  |
| ttttataaat | aggtataaaa aaatgttttg cctgccaaaa aaaaaaaaaa aaaaaa 1796      |

<210> 44  
 <211> 2136  
 <212> DNA  
 <213> Homo sapiens

|            |  |
|------------|--|
| <400> 44   |  |
| ggggacggag | ccgctgtcaa ctctccaact cagctcagct gatcggttgc cgccgccgcc 60  |
| gccgccagat | tctggaggcg aagaacgcaa agctgagaac atggacgtta atatcgcccc 120 |
| actccgcgcc | tgggacgatt tcttcccggg ttccgacgcg ttgcccggc cggaattcag 180  |

|             |             |             |            |             |             |      |
|-------------|-------------|-------------|------------|-------------|-------------|------|
| ggacatttcc  | aaatggaaca  | accgcgtagt  | gagcaacctg | ctctattacc  | agaccaacta  | 240  |
| cctggtggtg  | gctgccatga  | tgattttccat | tgtgggggtt | ctgagtcctt  | tcaacatgat  | 300  |
| cctgggagga  | atcgtggtgg  | tgctgggtgt  | cacaggggtt | gtgtgggcag  | cccacaataa  | 360  |
| agacgtcctt  | cgccggatga  | agaagcgcta  | ccccacgacg | ttcgttatgg  | tggtcatgtt  | 420  |
| ggcgaagctat | ttccttatct  | ccatgttttg  | aggagtcatg | gtctttgtgt  | ttggcattac  | 480  |
| ttttcctttg  | ctgttgatgt  | ttatccatgc  | atcgttgaga | cttcggaacc  | tcaagaacaa  | 540  |
| actggagaat  | aaaatggaag  | gaatagggtt  | gaagaggaca | ccgatgggca  | ttgtcctgga  | 600  |
| tgccctagaa  | cagcaggaag  | aaggcatcaa  | cagactcact | gactatatca  | gcaaagtga   | 660  |
| ggaataaaca  | taacttacct  | gagctagggt  | tgcagcagaa | attgagttgc  | agcttgccct  | 720  |
| tgtccagacc  | tatktttctg  | ttgcgttttt  | gaaacaggag | gtgcacgtac  | cacccaatta  | 780  |
| tctatggcag  | catgcagtga  | tagggccgaac | tattatcagc | tctgatgttt  | cagagagaag  | 840  |
| acctcagaaa  | ccgaaagaaa  | accaccaccc  | tcctattgtg | tctgaagtgt  | cacgtgtgtt  | 900  |
| tatgaaatct  | aatgggaaat  | ggatcacacg  | atcttcttaa | gggaattaaa  | aaaaataaaa  | 960  |
| gaattacggc  | ttttacagca  | acaatacgat  | tatcttatag | gaaaaaaaaa  | atcattgtaa  | 1020 |
| agtatcaaga  | caatacgagt  | aaatgaaaag  | gctgttaaag | tagatgacat  | catgtgttag  | 1080 |
| cctgttccta  | atccccctaga | attgtaatgt  | gtgggatata | aattagtttt  | tattattctc  | 1140 |
| ttaaaaatca  | aagatgatct  | ctatcacttt  | gccacctgtt | tgatgtgcag  | tggaaactgg  | 1200 |
| ttaagccagt  | tgttcatact  | tcsttttaca  | atataaagat | agctgttttag | gatattttgt  | 1260 |
| tacatttttg  | taaatttttg  | aaatgctagt  | aatgtgtttt | caccagcaag  | tatttgttgc  | 1320 |
| aaacttaatg  | tcatttttct  | taagatgggt  | acagctatgt | aacctgtatt  | attctggacg  | 1380 |
| gacttattaa  | aatacaaaaca | gacaaaaaat  | aaaacaaaac | ttgagttcta  | tttaccttgc  | 1440 |
| acattttttg  | ttgttacagt  | gaaaaaaaat  | gtccaagaaa | atgttttgcca | tttttgcatt  | 1500 |
| gtttcgtttt  | taactggaac  | atthagaaag  | aaggaaatga | atgtgcattt  | tattaattcc  | 1560 |
| ttaggggcac  | aaggaggaca  | ataatagctg  | atcttttgaa | atltgaaaaa  | cgtcttttag  | 1620 |
| tgaccaagca  | aaaagacttt  | aaaaaatggt  | aatgaaaatg | gaatgcagct  | actgcagcta  | 1680 |
| ataaaaaatt  | ttagatagca  | attgttacaa  | ccatagcctt | ttatagctag  | acattagaat  | 1740 |
| tatgatagca  | tgagtttata  | cattctatta  | tttttctctc | ctttctcatg  | tttttataaa  | 1800 |
| taggtaataa  | aaaatgtttt  | gcctgccaat  | tgaatgattt | cgtagctgaa  | gtagaaacat  | 1860 |
| ttaggtttct  | gtagcattaa  | attgtgaaga  | caactggagt | ggtacttact  | gaagaaactc  | 1920 |
| tctgtatgtc  | ctagaataag  | aagcaatgat  | gtgctgcttc | tgatttttct  | tgcatttttaa | 1980 |
| attctcagcc  | aacctacagc  | catgatcttt  | agcagagtga | tatcaccatg  | acttcacaga  | 2040 |
| catggtctag  | aatctgtacc  | cttaccacac  | tatgaagaat | aaaattgatt  | aaagggttaa  | 2100 |
| aaaaaaaawaa | aaaaamwagg  | ggggcccggt  | wccag      |             |             | 2136 |

&lt;210&gt; 45

&lt;211&gt; 2081

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 45

|             |            |            |            |            |             |      |
|-------------|------------|------------|------------|------------|-------------|------|
| ttattcggaa  | ttaaccctca | ctaaaggcaa | caaagctggg | agctccaccg | cgggtggcggc | 60   |
| cgctctagaa  | ctagtggatc | ccccgggctg | cagggaattc | ggcacgagct | tgtaagaagg  | 120  |
| ctcatgccat  | tgaccctctt | aattctctcc | tgtttggcgg | actggacaat | ggcggaggct  | 180  |
| gaaggcaatg  | caagctgcac | agtcagtcta | gggggtgcca | atatggcaga | gaccacaaa   | 240  |
| gccatgatcc  | tgcaactcaa | tcccagttag | aactgcacct | ggacaataga | aagaccagaa  | 300  |
| aacaaaagca  | tcagaattat | cttttcttat | gtcccagctt | gatccagatg | gaagctgtga  | 360  |
| aagtgaaaac  | attaaagtct | ttgacggaac | ctccagcaat | gggcctctgc | tagggcaagt  | 420  |
| ctgcagtaaa  | aacgactatg | ttcctgtatt | tgaatcatca | tccagtacat | tgacgtttca  | 480  |
| aatagttact  | gactcagcaa | gaattcaaag | aactgtcttt | gtcttctact | acttcttctc  | 540  |
| tcctaacatc  | tctattccaa | actgtggcgg | ttacctggat | accttggaag | gatccttcac  | 600  |
| cagccccaat  | tacccaaagc | cgcatcctga | gctggcttat | tgtgtgtggc | acatacaagt  | 660  |
| ggagaaaagat | tacaagataa | aactaaactt | caaagagatt | ttcctagaaa | tagacaaaca  | 720  |
| gtgcaaattt  | gattttcttg | ccatctatga | tggccccctc | accaactctg | gcctgatttg  | 780  |
| acaagtctgt  | ggccgtgtga | ctcccacett | cgaatcgtca | tcaaactctc | tgactgtcgt  | 840  |
| gttgtctaca  | gattatgcca | attcttaccg | gggattttct | gcttcctaca | cctcaattta  | 900  |
| tgcagaaaac  | atcaacacta | catctttaac | ttgctcttct | gacaggatga | gagttattat  | 960  |
| aagcaaattc  | tacctagagg | cttttaactc | taatgggaat | aacttgcaac | taaaagacct  | 1020 |
| aacttggcag  | accaaaatta | tcaaatgggt | ggggaatttt | ctggtcctct | taatggatgt  | 1080 |

|             |             |            |             |            |             |      |
|-------------|-------------|------------|-------------|------------|-------------|------|
| ggtacattca  | gaaaggtaga  | aagttcagtc | aattccttcc  | accaatataa | tccctttttc  | 1140 |
| tgcacctca   | acttctaaag  | tgatcacccg | tcagaaacaa  | ctccagatta | ttgtgaagtg  | 1200 |
| taatggacat  | aattctacag  | tggagataat | atacataaca  | gaagatgatg | taatacaaaag | 1260 |
| tcaaaatgca  | ctgggcaaat  | ataacaccag | catggctctt  | tttgaatcca | attcatttga  | 1320 |
| aaagactata  | cttgaatcac  | catattatgt | ggatttgaac  | caaactcttt | ttgttcaagt  | 1380 |
| tagtctgcac  | acctcagatc  | caaatttggg | gggtgttctt  | gatacctgta | gagcctctcc  | 1440 |
| cacctctgac  | tttgcacctc  | caacctacga | cctaatacaag | agtggatgta | gtcagatga   | 1500 |
| aacttgaag   | gtgtatccct  | tatttggaca | ctatgggaga  | ttccagttta | atgcctttaa  | 1560 |
| attcttgaga  | agtatgagct  | ctgtgtatct | gcagtgtaaa  | gttttgatat | gtgatagcag  | 1620 |
| tgaccaccag  | tctcgctgca  | atcaagggtg | tgtctccaga  | agcaaacgag | acatttcttc  | 1680 |
| atataaatgg  | aaaacagatt  | ccatcatagg | acccattcgt  | ctgaaaaggg | atcgaagtgc  | 1740 |
| aagtggcaat  | tcaggatttc  | agcatgaaac | acatgcgga   | gaaactccaa | accagccttt  | 1800 |
| caacagtgtg  | catctgtttt  | ccttcatggg | tctagctctg  | aatgtgggtg | ctgtagcgac  | 1860 |
| aatcacagtg  | aggcattttg  | taaatcaacg | ggcagactac  | aaataccaga | agctgcagaa  | 1920 |
| ctattaacta  | acagggtccaa | ccctaagtga | gacatgtttc  | tccaggatgc | caaaggaaat  | 1980 |
| gctacctcgt  | ggctacacat  | attatgaata | aatgaggaag  | ggcctgaaag | tgacacacag  | 2040 |
| gcctgcacaaa | aaaaaaaaaa  | aaaaaaaaaa | aaaaaaaaaa  | a          |             | 2081 |

&lt;210&gt; 46

&lt;211&gt; 1135

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 46

|             |            |             |             |            |             |      |
|-------------|------------|-------------|-------------|------------|-------------|------|
| gcttgaccgc  | ccacctggca | ggagcaggac  | aggacggccg  | gacgcggcca | tggccgagct  | 60   |
| cccggggccc  | tttctctgcg | gggocctgct  | aggcttctctg | tgcctgagtg | ggctggccgt  | 120  |
| ggaggtgaag  | gtacccacag | agccgctgag  | cacgcccctg  | gggaagacag | ccgagctgac  | 180  |
| ctgcacctac  | agcacgtcgg | tgggagacag  | cttcgcccctg | gagtggagct | ttgtgcagcc  | 240  |
| tgggaaaccc  | atctctgagt | cccatccaat  | cctgtacttc  | accaatggcc | atctgtatcc  | 300  |
| aactggttct  | aagtcaaagc | gggtcagcct  | gcttcagaac  | ccccccacag | tgggggtggc  | 360  |
| cacactgaaa  | ctgactgacg | tccaccccctc | agatactgga  | acctacctct | gccaaagtcaa | 420  |
| caaccaccca  | gatttctaca | ccaatggggt  | ggggctaate  | aaccttactg | tgtgtgttcc  | 480  |
| ccccagtaat  | cccttatgca | gtcagagtgg  | acaaacctct  | gtgggaggct | ctactgcact  | 540  |
| gagatgcagc  | tcttccgagg | gggctcctaa  | gccagtgtag  | aactgggtgc | gtcttggaac  | 600  |
| ttttcctaca  | ccttctcctg | gcagcatggg  | tcaagatgag  | gtgtctggcc | agctcattct  | 660  |
| caccaacctc  | tccctgacct | cctcgggcac  | ctaccgctgt  | gtggccacca | accagatggg  | 720  |
| cagtgcattcc | tgtgagctga | ccctstctgt  | gaccgaaccc  | tcccaaggcc | gagtggcga   | 780  |
| gctctgattg  | gggtgctcct | gggcgtgctg  | ttgtgtgcag  | ttgtctgcgt | ctgcctggtc  | 840  |
| aggttccaga  | aagagagggg | gaagaagccc  | aaggagacat  | atgggggtag | tgaccttcgg  | 900  |
| gaggatgcca  | tcgctcctgg | gatctctgag  | cacacttgta  | tgagggtga  | ttctagcaag  | 960  |
| gggttcctgg  | aaagaccctc | gtctgccagc  | accgtgacga  | ccaccaagtc | caagctccct  | 1020 |
| atggtcgtgt  | gacttctccc | gatccctgag  | ggcgggtgag  | gggaatatca | ataattaaag  | 1080 |
| tctgtgggta  | ccawaaaaaa | aaaaaaaaaa  | aaaaaaactc  | gagggggggc | ccggt       | 1135 |

&lt;210&gt; 47

&lt;211&gt; 1227

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 47

|             |             |             |            |            |            |     |
|-------------|-------------|-------------|------------|------------|------------|-----|
| ggcacgaggt  | ggggctcctc  | tctggcctcc  | tgccctcctc | gctgctgctg | ctgcttccat | 60  |
| tgtgtggcagc | ccaggggtggg | gggtggcctgc | aggcagcgct | gctggccctt | gaggtggggc | 120 |
| tgggtgggtct | gggggcctcc  | tacctgctcc  | tttgtacagc | cctgcacctg | ccctccagtc | 180 |
| ttttcctact  | cctggcccag  | ggtaccgcac  | tggggggcgt | cctgggcctg | agctggcgcc | 240 |
| gaggcctcat  | gggtgttccc  | ctgggccttg  | gagctgcctg | gctcttagct | tggccaggcc | 300 |
| tagctctacc  | tctgggtggc  | atggcagcgg  | ggggcagatg | ggtgcggcag | cagggccccc | 360 |
| gggtgcgcgc  | gggcatatct  | cgactctggt  | tgcgggttct | gctgcgcctg | tcacccatgg | 420 |

```

ccttccgggc cctgcagggc tgtggggctg tgggggaccg ggggtctgtt gcactgtacc 480
ccaaaaccaa caaggatggc ttccgcagcc gcctgcccgt ccctggggcc cggcggcgta 540
atccccgcac caccacaacac ccattagctc tgttggcaag ggtctgggtc ctgtgcaagg 600
gctggaactg gcgtctggca cggggccagcc aggggttagc atcccacttg ccccggtggg 660
ccatccacac actggccagc tggggcctgc ttgggggtga acggccaccc gaatcccccg 720
gctactacca cgcagccagc gccagctagg gccccctgcc tcccgccagc cactgccagg 780
gactctagcc gggcggaggt cacgcacccg ccagtcccgg gccctgcccc cctggaggta 840
gctgactcca gcccttccag cccaaatcta gagcattgag cactttatct cccacgactc 900
agtgaagttt ctccagtccc tagtcctctc ttttcaccca ccttcctcag tttgctcact 960
taccacaggc ccagccttcg gacctctaga caggcagcct cctcagctgt ggagtccagc 1020
agtcaacttg tgttctcctg gcgctcctcc cctaagttat tgctgttcgc ccgctgtgtg 1080
tgctcatcct caccctcatt gactcaggcc tggggccagg ggtggtggag ggtgggaaga 1140
gtcatgtttt ttttctctc tttgattttg tttttctgtc tcccttccaa cctgtccctt 1200
ccccccacca aaaaaaaaaa aaaaaaa 1227

```

<210> 48  
 <211> 41  
 <212> PRT  
 <213> Homo sapiens

<220>  
 <221> SITE  
 <222> (41)  
 <223> Xaa equals stop translation

<400> 48  
 Met Pro Leu Gln Pro Trp Asp Thr Phe Met Ile Leu Gly Leu Tyr Phe  
   1                  5                  10                  15  
 Leu Val Ser Gly Met Thr Ser Asp Ser Ala Gly Gln Gly Lys Leu Asn  
                   20                  25                  30  
 Ser Val Gln Asp Gly His His Trp Xaa  
                   35                  40

<210> 49  
 <211> 294  
 <212> PRT  
 <213> Homo sapiens

<220>  
 <221> SITE  
 <222> (294)  
 <223> Xaa equals stop translation

<400> 49  
 Met Val Ile Phe Thr Leu Ser Val Ser Met Leu Leu Arg Tyr Ser His  
   1                  5                  10                  15  
 His Gln Ile Phe Val Phe Ile Ala Pro Leu Leu Thr Val Ile Leu Ala  
                   20                  25                  30  
 Leu Val Gly Met Glu Ala Ile Met Ser Glu Phe Phe Asn Asp Thr Thr  
                   35                  40                  45  
 Thr Ala Phe Tyr Ile Ile Leu Ile Val Trp Leu Ala Asp Gln Tyr Asp  
                   50                  55                  60

Ala Ile Cys Cys His Thr Ser Thr Ser Lys Arg His Trp Leu Arg Phe  
 65 70 75 80  
 Phe Tyr Leu Tyr His Phe Ala Phe Tyr Ala Tyr His Tyr Arg Phe Asn  
 85 90 95  
 Gly Gln Tyr Ser Ser Leu Ala Leu Val Thr Ser Trp Leu Phe Ile Gln  
 100 105 110  
 His Ser Met Ile Tyr Phe Phe His His Tyr Glu Leu Pro Ala Ile Leu  
 115 120 125  
 Gln Gln Val Arg Ile Gln Glu Met Leu Leu Gln Ala Pro Pro Leu Gly  
 130 135 140  
 Pro Gly Thr Pro Thr Ala Leu Pro Asp Asp Met Asn Asn Asn Ser Gly  
 145 150 155 160  
 Ala Pro Ala Thr Ala Pro Asp Ser Ala Gly Gln Pro Pro Ala Leu Gly  
 165 170 175  
 Pro Val Ser Pro Gly Ala Ser Gly Ser Pro Gly Pro Val Ala Ala Ala  
 180 185 190  
 Pro Ser Ser Leu Val Ala Ala Ala Ala Ser Val Ala Ala Ala Ala Gly  
 195 200 205  
 Gly Asp Leu Gly Trp Met Ala Glu Thr Ala Ala Ile Ile Thr Asp Ala  
 210 215 220  
 Ser Phe Leu Ser Gly Leu Ser Ala Ser Leu Leu Glu Arg Arg Pro Ala  
 225 230 235 240  
 Ser Pro Leu Gly Pro Ala Gly Gly Leu Pro His Ala Pro Gln Asp Ser  
 245 250 255  
 Val Pro Pro Ser Asp Ser Ala Ala Ser Asp Thr Thr Pro Leu Gly Ala  
 260 265 270  
 Ala Val Gly Gly Pro Ser Pro Ala Ser Met Ala Pro Thr Glu Ala Pro  
 275 280 285  
 Ser Glu Val Gly Ser Xaa  
 290

<210> 50

<211> 119

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (119)

<223> Xaa equals stop translation

<400> 50

Met Ala Gly Pro Arg Gly Leu Leu Pro Leu Cys Leu Leu Ala Phe Cys

|   |     |     |     |
|---|-----|-----|-----|
| 1   | 5   | 10  | 15  |
| Leu Ala Gly Phe Ser Phe Val Arg Gly Gln Val Leu Phe Lys Gly Cys | 20  | 25  | 30  |
| Asp Val Lys Thr Thr Phe Val Thr His Val Pro Cys Thr Ser Cys Ala | 35  | 40  | 45  |
| Ala Ile Lys Lys Gln Thr Cys Pro Ser Gly Trp Leu Arg Glu Leu Pro | 50  | 55  | 60  |
| Asp Gln Ile Thr Gln Asp Cys Arg Cys Gly Pro Pro Leu Ser Leu Pro | 65  | 70  | 75  |
| Val Ser Arg Ser Ile Leu Trp Gly Gly Arg Asp Ser Gly Ser Leu Thr | 85  | 90  | 95  |
| Gly Pro Gln Asn Glu Glu Lys His Ser Leu Ile His Ala Pro Val Ala | 100 | 105 | 110 |
| Pro Pro Gly Trp Trp Arg Xaa                                     | 115 |     |     |

<210> 51  
 <211> 77  
 <212> PRT  
 <213> Homo sapiens

<220>  
 <221> SITE  
 <222> (77)  
 <223> Xaa equals stop translation

|   |
|---|
| <400> 51  |
| Met Thr Ser Ile Phe Thr Ser Leu Ala Val Val Thr Gly Val Leu Ile |
| 1 5 10 15   |
| Leu Val Gly Cys Cys Ile Thr Pro Ser Val His Gly Leu Val Gln Arg |
| 20 25 30  |
| Leu Thr Glu Thr Ala Leu Thr Lys Thr Ser Leu Asn Ser Ser Pro Pro |
| 35 40 45  |
| Tyr Ser Asp Lys Leu Pro Leu Leu Asp His Gln Glu Glu Gln Gln Ser |
| 50 55 60  |
| Gln Ile Met Phe Glu Lys Phe Glu Glu Gly Lys Leu Xaa             |
| 65 70 75  |

<210> 52  
 <211> 70  
 <212> PRT  
 <213> Homo sapiens

<220>  
 <221> SITE  
 <222> (70)

<223> Xaa equals stop translation

<400> 52

```
Met Trp Ser Leu Val Ser Val Ser Val Leu Val Leu Thr Cys Ala Val
 1              5              10              15

Asp Val Ala Glu Gly Leu Gly Trp Gly Glu Val Ser Thr Gly Gly Ile
          20              25              30

Glu Leu Pro Arg His Met Val Leu Val Val Leu Val Glu Arg Glu Phe
 35              40              45

Pro Glu Val Ser Asp Met Leu Pro Leu Lys Pro Phe Pro Gln Gly Asp
 50              55              60

Arg Tyr Val Ser Arg Xaa
 65              70
```

<210> 53

<211> 320

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (320)

<223> Xaa equals stop translation

<400> 53

```
Met Ser Ser Asn Lys Glu Gln Arg Ser Ala Val Phe Val Ile Leu Phe
 1              5              10              15

Ala Leu Ile Thr Ile Leu Ile Leu Tyr Ser Ser Asn Ser Ala Asn Glu
          20              25              30

Val Phe His Tyr Gly Ser Leu Arg Gly Arg Ser Arg Arg Pro Val Asn
 35              40              45

Leu Lys Lys Trp Ser Ile Thr Asp Gly Tyr Val Pro Ile Leu Gly Asn
 50              55              60

Lys Thr Leu Pro Ser Arg Cys His Gln Cys Val Ile Val Ser Ser Ser
 65              70              75              80

Ser His Leu Leu Gly Thr Lys Leu Gly Pro Glu Ile Glu Arg Ala Glu
          85              90              95

Cys Thr Ile Arg Met Asn Asp Ala Pro Thr Thr Gly Tyr Ser Ala Asp
 100              105              110

Val Gly Asn Lys Thr Thr Tyr Arg Val Val Ala His Ser Ser Val Phe
 115              120              125

Arg Val Leu Arg Arg Pro Gln Glu Phe Val Asn Arg Thr Pro Glu Thr
 130              135              140

Val Phe Ile Phe Trp Gly Pro Pro Ser Lys Met Gln Lys Pro Gln Gly
 145              150              155              160
```



Ser Leu Val Arg Val Ile Gln Arg Ala Gly Leu Val Phe Pro Asn Met  
                             165                            170                            175  
 Glu Ala Tyr Ala Val Ser Pro Gly Arg Met Arg Gln Phe Asp Asp Leu  
                             180                            185                            190  
 Phe Arg Gly Glu Thr Gly Lys Asp Arg Glu Lys Ser His Ser Trp Leu  
                             195                            200                            205  
 Ser Thr Gly Trp Phe Thr Met Val Ile Ala Val Glu Leu Cys Asp His  
                             210                            215                            220  
 Val His Val Tyr Gly Met Val Pro Pro Asn Tyr Cys Ser Gln Arg Pro  
                             225                            230                            235                            240  
 Arg Leu Gln Arg Met Pro Tyr His Tyr Tyr Glu Pro Lys Gly Pro Asp  
                             245                            250                            255  
 Glu Cys Val Thr Tyr Ile Gln Asn Glu His Ser Arg Lys Gly Asn His  
                             260                            265                            270  
 His Arg Phe Ile Arg Glu Lys Gly Leu Leu Ile Val Gly Pro Ala Val  
                             275                            280                            285  
 Trp His His Leu Leu Pro Pro Leu Leu Asp Leu Gly His Pro Ala Cys  
                             290                            295                            300  
 Gly Thr Ser Gly Gly Ser Glu Glu Lys Gln Pro Pro Pro Ser Arg Xaa  
                             305                            310                            315                            320

<210> 54

<211> 97

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (97)

<223> Xaa equals stop translation

<400> 54

Met Ala Ala Ser Leu Gly Gln Val Leu Ala Leu Val Leu Val Ala Ala  
     1                            5                            10                            15

Leu Trp Gly Gly Thr Gln Pro Leu Leu Lys Arg Ala Ser Ala Gly Leu  
                             20                            25                            30

Gln Arg Val His Glu Pro Thr Trp Ala Gln Gln Leu Leu Gln Glu Met  
                             35                            40                            45

Lys Thr Leu Phe Leu Asn Thr Glu Tyr Leu Met Pro Phe Leu Leu Asn  
                             50                            55                            60

Gln Cys Gly Ser Leu Leu Tyr Tyr Leu Thr Leu Ala Ser Thr Gly Trp

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 65  |     | 70  |     | 75  |     | 80  |     |     |     |     |     |     |     |     |     |
| Ser | Gln | Thr | Ser | Glu | Phe | Arg | Ser | Ser | Cys | Trp | Asn | Pro | Gly | Lys | His |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |

Xaa

<210> 55  
 <211> 373  
 <212> PRT  
 <213> Homo sapiens

<220>  
 <221> SITE  
 <222> (81)  
 <223> Xaa equals any of the naturally occurring L-amino acids.

<220>  
 <221> SITE  
 <222> (162)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (314)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (315)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (373)  
 <223> Xaa equals stop translation

<400> 55  
 Met Ala Trp Thr Lys Tyr Gln Leu Phe Leu Ala Gly Leu Met Leu Val  
   1                  5                  10                  15  
 Thr Gly Ser Ile Asn Thr Leu Ser Ala Lys Trp Ala Asp Asn Phe Met  
           20                  25                  30  
 Ala Glu Gly Cys Gly Gly Ser Lys Glu His Ser Phe Gln His Pro Phe  
       35                  40                  45  
 Leu Gln Ala Val Gly Met Phe Leu Gly Glu Phe Ser Cys Leu Ala Ala  
   50                  55                  60  
 Phe Tyr Leu Leu Arg Cys Arg Ala Ala Gly Gln Ser Asp Ser Ser Val  
   65                  70                  75                  80  
 Xaa Pro Gln Gln Pro Phe Asn Pro Leu Leu Phe Leu Pro Pro Ala Leu  
           85                  90                  95  
 Cys Asp Met Thr Gly Thr Ser Leu Met Tyr Val Ala Leu Asn Met Thr

| 100  | 105 | 110 |
|--|-----|-----|
| Ser Ala Ser Ser Phe Gln Met Leu Arg Gly Ala Ser Asp His Ile His<br>115 120 125     |     |     |
| Trp Pro Val Leu Gly Gly Leu Pro Gly Pro Glu Ala Gly Ala Glu Pro<br>130 135 140     |     |     |
| Val Ala Gly His Pro Ser His His Arg Gly Ala Gly Gly Arg Gly Pro<br>145 150 155 160 |     |     |
| Gly Xaa Pro Pro Glu Gln Ala Arg Gln Ser Ser Thr Ser Phe Ser Glu<br>165 170 175     |     |     |
| Val Ile Thr Gly Asp Leu Leu Ile Ile Met Ala Gln Ile Ile Val Ala<br>180 185 190     |     |     |
| Ile Gln Met Val Leu Glu Glu Lys Phe Val Tyr Lys His Asn Val His<br>195 200 205     |     |     |
| Pro Leu Arg Ala Val Gly Thr Glu Gly Leu Phe Gly Phe Val Ile Leu<br>210 215 220     |     |     |
| Ser Leu Leu Leu Val Pro Met Tyr Tyr Ile Pro Ala Gly Ser Phe Ser<br>225 230 235 240 |     |     |
| Gly Asn Pro Arg Gly Thr Leu Glu Asp Ala Leu Asp Ala Phe Cys Gln<br>245 250 255     |     |     |
| Val Gly Gln Gln Pro Leu Ile Ala Val Ala Leu Leu Gly Asn Ile Ser<br>260 265 270     |     |     |
| Ser Ile Ala Phe Phe Asn Phe Ala Gly Ile Ser Val Thr Lys Glu Leu<br>275 280 285     |     |     |
| Ser Ala Thr Thr Arg Met Val Leu Asp Ser Leu Arg Thr Val Val Ile<br>290 295 300     |     |     |
| Trp Ala Leu Ser Leu Ala Leu Gly Trp Xaa Xaa Phe His Ala Leu Gln<br>305 310 315 320 |     |     |
| Ile Leu Gly Phe Leu Ile Leu Leu Ile Gly Thr Ala Leu Tyr Asn Gly<br>325 330 335     |     |     |
| Leu His Arg Pro Leu Leu Gly Arg Leu Ser Arg Gly Arg Pro Leu Ala<br>340 345 350     |     |     |
| Glu Glu Ser Glu Gln Glu Arg Leu Leu Gly Gly Thr Arg Thr Pro Ile<br>355 360 365     |     |     |
| Asn Asp Ala Ser Xaa<br>370   |     |     |

&lt;210&gt; 56

&lt;211&gt; 491

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 56

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Glu | Asn | Glu | Glu | Ser | Asp | Val | Lys | Pro | Pro | Asp | Trp | Pro | Asn | Pro |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Met | Asn | Ala | Thr | Ser | Gln | Phe | Pro | Gln | Pro | Gln | His | Phe | Asp | Ser | Phe |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Gly | Leu | Arg | Leu | Pro | Arg | Asp | Ile | Thr | Glu | Leu | Pro | Glu | Trp | Ser | Glu |
|     | 35  |     |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Gly | Tyr | Pro | Phe | Tyr | Met | Ala | Met | Gly | Phe | Pro | Gly | Tyr | Asp | Leu | Ser |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Ala | Asp | Asp | Ile | Ala | Gly | Lys | Phe | Gln | Phe | Ser | Arg | Gly | Met | Arg | Arg |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |
| Ser | Tyr | Asp | Ala | Gly | Phe | Lys | Leu | Met | Val | Val | Glu | Tyr | Ala | Glu | Ser |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |
| Thr | Asn | Asn | Cys | Gln | Ala | Ala | Lys | Gln | Phe | Gly | Val | Leu | Glu | Lys | Asn |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Val | Arg | Asp | Trp | Arg | Lys | Val | Lys | Pro | Gln | Leu | Gln | Asn | Ala | His | Ala |
|     | 115 |     |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |
| Met | Arg | Arg | Ala | Phe | Arg | Gly | Pro | Lys | Asn | Gly | Arg | Phe | Ala | Leu | Val |
| 130 |     |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |
| Asp | Gln | Arg | Val | Ala | Glu | Tyr | Val | Arg | Tyr | Met | Gln | Ala | Lys | Gly | Asp |
| 145 |     |     |     |     | 150 |     |     |     | 155 |     |     |     |     | 160 |     |
| Pro | Ile | Thr | Arg | Glu | Ala | Met | Gln | Leu | Lys | Ala | Leu | Glu | Ile | Ala | Gln |
|     |     |     |     | 165 |     |     |     | 170 |     |     |     |     |     | 175 |     |
| Glu | Met | Asn | Ile | Pro | Glu | Lys | Gly | Phe | Lys | Ala | Ser | Leu | Gly | Trp | Cys |
|     |     |     | 180 |     |     |     |     | 185 |     |     |     |     | 190 |     |     |
| Arg | Arg | Met | Met | Arg | Arg | Tyr | Asp | Leu | Ser | Leu | Arg | His | Lys | Val | Pro |
|     |     | 195 |     |     |     |     | 200 |     |     |     |     | 205 |     |     |     |
| Val | Pro | Gln | His | Leu | Pro | Glu | Asp | Leu | Thr | Glu | Lys | Leu | Val | Thr | Tyr |
|     | 210 |     |     |     |     | 215 |     |     |     |     | 220 |     |     |     |     |
| Gln | Arg | Ser | Val | Leu | Ala | Leu | Arg | Arg | Ala | His | Asp | Tyr | Glu | Val | Ala |
| 225 |     |     |     |     | 230 |     |     |     |     | 235 |     |     |     |     | 240 |
| Gln | Met | Gly | Asn | Ala | Asp | Glu | Thr | Pro | Ile | Cys | Leu | Glu | Val | Pro | Ser |
|     |     |     |     | 245 |     |     |     |     | 250 |     |     |     |     | 255 |     |
| Arg | Val | Thr | Val | Asp | Asn | Gln | Gly | Glu | Lys | Pro | Val | Leu | Val | Lys | Thr |
|     |     |     | 260 |     |     |     |     | 265 |     |     |     |     | 270 |     |     |
| Pro | Gly | Arg | Glu | Lys | Leu | Lys | Ile | Thr | Ala | Met | Leu | Gly | Val | Leu | Ala |
|     | 275 |     |     |     |     |     | 280 |     |     |     |     | 285 |     |     |     |
| Asp | Gly | Arg | Lys | Leu | Pro | Pro | Tyr | Ile | Ile | Leu | Arg | Gly | Thr | Tyr | Ile |
| 290 |     |     |     |     |     | 295 |     |     |     |     | 300 |     |     |     |     |
| Pro | Pro | Gly | Lys | Phe | Pro | Ser | Gly | Met | Glu | Ile | Arg | Cys | His | Arg | Tyr |

305                      310                      315                      320  
 Gly Trp Met Thr Glu Asp Leu Met Gln Asp Trp Leu Glu Val Val Trp  
                                  325                      330                      335  
 Arg Arg Arg Thr Gly Ala Val Pro Lys Gln Arg Gly Met Leu Ile Leu  
                                  340                      345                      350  
 Asn Gly Phe Arg Gly His Ala Thr Asp Ser Val Lys Asn Ser Met Glu  
                                  355                      360                      365  
 Ser Met Asn Thr Asp Met Val Ile Ile Pro Gly Gly Leu Thr Ser Gln  
                                  370                      375                      380  
 Leu Gln Val Leu Asp Val Val Val Tyr Lys Pro Leu Asn Asp Ser Val  
 385                                   390                      395                      400  
 Arg Ala Gln Tyr Ser Asn Trp Leu Leu Ala Gly Asn Leu Ala Leu Ser  
                                  405                      410                      415  
 Pro Thr Gly Asn Ala Lys Lys Pro Pro Leu Gly Leu Phe Leu Glu Trp  
                                  420                      425                      430  
 Val Met Val Ala Trp Asn Ser Ile Ser Ser Glu Ser Ile Val Gln Gly  
                                  435                      440                      445  
 Phe Lys Asn Cys His Ile Ser Ser Asn Leu Glu Glu Glu Asp Asp Val  
                                  450                      455                      460  
 Leu Trp Glu Ile Glu Ser Glu Leu Pro Gly Gly Gly Glu Pro Pro Lys  
 465                                   470                      475                      480  
 Asp Cys Asp Thr Glu Ser Met Ala Glu Ser Asn  
                                  485                      490

<210> 57  
 <211> 188  
 <212> PRT  
 <213> Homo sapiens

<400> 57  
 Met Asp Val Asn Ile Ala Pro Leu Arg Ala Trp Asp Asp Phe Phe Pro  
   1                      5                      10                      15  
 Gly Ser Asp Arg Phe Ala Arg Pro Asp Phe Arg Asp Ile Ser Lys Trp  
                                  20                      25                      30  
 Asn Asn Arg Val Val Ser Asn Leu Leu Tyr Tyr Gln Thr Asn Tyr Leu  
                                  35                      40                      45  
 Val Val Ala Ala Met Met Ile Ser Ile Val Gly Phe Leu Ser Pro Phe  
                                  50                      55                      60  
 Asn Met Ile Leu Gly Gly Ile Val Val Val Leu Val Phe Thr Gly Phe  
   65                      70                      75                      80  
 Val Trp Ala Ala His Asn Lys Asp Val Leu Arg Arg Met Lys Lys Arg  
                                  85                      90                      95

Tyr Pro Thr Thr Phe Val Met Val Val Met Leu Ala Ser Tyr Phe Leu  
                   100                                  105                                  110  
 Ile Ser Met Phe Gly Gly Val Met Val Phe Val Phe Gly Ile Thr Phe  
                   115                                  120                                  125  
 Pro Leu Leu Leu Met Phe Ile His Ala Ser Leu Arg Leu Arg Asn Leu  
                   130                                  135                                  140  
 Lys Asn Lys Leu Glu Asn Lys Met Glu Gly Ile Gly Leu Lys Arg Thr  
                   145                                  150                                  155                                  160  
 Pro Met Gly Ile Val Leu Asp Ala Leu Glu Gln Gln Glu Glu Gly Ile  
                                   165                                  170                                  175  
 Asn Arg Leu Thr Asp Tyr Ile Ser Lys Val Lys Glu  
                   180                                  185

<210> 58  
 <211> 41  
 <212> PRT  
 <213> Homo sapiens

<220>  
 <221> SITE  
 <222> (41)  
 <223> Xaa equals stop translation

<400> 58  
 Met Met Gly Glu Arg Cys Leu Ala Leu Asn Val Leu Phe Ala Gly Val  
           1                                  5                                  10                                  15  
 Ala Ser Cys Gln Arg Leu Phe Ser Arg Asn Leu Ser Cys His Cys Phe  
                   20                                  25                                  30  
 Gly Asp Tyr Cys Asp Pro Ser Leu Xaa  
                   35                                  40

<210> 59  
 <211> 315  
 <212> PRT  
 <213> Homo sapiens

<400> 59  
 Met Pro Leu Thr Leu Leu Ile Leu Ser Cys Leu Ala Glu Leu Thr Met  
           1                                  5                                  10                                  15  
 Ala Glu Ala Glu Gly Asn Ala Ser Cys Thr Val Ser Leu Gly Gly Ala  
                   20                                  25                                  30  
 Asn Met Ala Glu Thr His Lys Ala Met Ile Leu Gln Leu Asn Pro Ser  
                   35                                  40                                  45  
 Glu Asn Cys Thr Trp Thr Ile Glu Arg Pro Glu Asn Lys Ser Ile Arg  
           50                                  55                                  60

Ile Ile Phe Ser Tyr Val Gln Leu Asp Pro Asp Gly Ser Cys Glu Ser  
 65 70 75 80  
 Glu Asn Ile Lys Val Phe Asp Gly Thr Ser Ser Asn Gly Pro Leu Leu  
 85 90 95  
 Gly Gln Val Cys Ser Lys Asn Asp Tyr Val Pro Val Phe Glu Ser Ser  
 100 105 110  
 Ser Ser Thr Leu Thr Phe Gln Ile Val Thr Asp Ser Ala Arg Ile Gln  
 115 120 125  
 Arg Thr Val Phe Val Phe Tyr Tyr Phe Phe Ser Pro Asn Ile Ser Ile  
 130 135 140  
 Pro Asn Cys Gly Gly Tyr Leu Asp Thr Leu Glu Gly Ser Phe Thr Ser  
 145 150 155 160  
 Pro Asn Tyr Pro Lys Pro His Pro Glu Leu Ala Tyr Cys Val Trp His  
 165 170 175  
 Ile Gln Val Glu Lys Asp Tyr Lys Ile Lys Leu Asn Phe Lys Glu Ile  
 180 185 190  
 Phe Leu Glu Ile Asp Lys Gln Cys Lys Phe Asp Phe Leu Ala Ile Tyr  
 195 200 205  
 Asp Gly Pro Ser Thr Asn Ser Gly Leu Ile Gly Gln Val Cys Gly Arg  
 210 215 220  
 Val Thr Pro Thr Phe Glu Ser Ser Ser Asn Ser Leu Thr Val Val Leu  
 225 230 235 240  
 Ser Thr Asp Tyr Ala Asn Ser Tyr Arg Gly Phe Ser Ala Ser Tyr Thr  
 245 250 255  
 Ser Ile Tyr Ala Glu Asn Ile Asn Thr Thr Ser Leu Thr Cys Ser Ser  
 260 265 270  
 Asp Arg Met Arg Val Ile Ile Ser Lys Ser Tyr Leu Glu Ala Phe Asn  
 275 280 285  
 Ser Asn Gly Asn Asn Leu Gln Leu Lys Asp Pro Thr Trp Gln Thr Lys  
 290 295 300  
 Ile Ile Lys Cys Cys Gly Ile Phe Cys Pro Ser  
 305 310 315

<210> 60  
 <211> 327  
 <212> PRT  
 <213> Homo sapiens

<400> 60  
 Met Ala Glu Leu Pro Gly Pro Phe Leu Cys Gly Ala Leu Leu Gly Phe  
 1 5 10 15  
 Leu Cys Leu Ser Gly Leu Ala Val Glu Val Lys Val Pro Thr Glu Pro

| 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Ser | Thr | Pro | Leu | Gly | Lys | Thr | Ala | Glu | Leu | Thr | Cys | Thr | Tyr | Ser |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Thr | Ser | Val | Gly | Asp | Ser | Phe | Ala | Leu | Glu | Trp | Ser | Phe | Val | Gln | Pro |
|     |     | 50  |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Gly | Lys | Pro | Ile | Ser | Glu | Ser | His | Pro | Ile | Leu | Tyr | Phe | Thr | Asn | Gly |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |
| His | Leu | Tyr | Pro | Thr | Gly | Ser | Lys | Ser | Lys | Arg | Val | Ser | Leu | Leu | Gln |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |
| Asn | Pro | Pro | Thr | Val | Gly | Val | Ala | Thr | Leu | Lys | Leu | Thr | Asp | Val | His |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Pro | Ser | Asp | Thr | Gly | Thr | Tyr | Leu | Cys | Gln | Val | Asn | Asn | Pro | Pro | Asp |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |
| Phe | Tyr | Thr | Asn | Gly | Leu | Gly | Leu | Ile | Asn | Leu | Thr | Val | Leu | Val | Pro |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |
| Pro | Ser | Asn | Pro | Leu | Cys | Ser | Gln | Ser | Gly | Gln | Thr | Ser | Val | Gly | Gly |
| 145 |     |     |     | 150 |     |     |     |     |     | 155 |     |     |     |     | 160 |
| Ser | Thr | Ala | Leu | Arg | Cys | Ser | Ser | Ser | Glu | Gly | Ala | Pro | Lys | Pro | Val |
|     |     |     | 165 |     |     |     |     |     | 170 |     |     |     |     | 175 |     |
| Tyr | Asn | Trp | Val | Arg | Leu | Gly | Thr | Phe | Pro | Thr | Pro | Ser | Pro | Gly | Ser |
|     |     |     | 180 |     |     |     |     | 185 |     |     |     |     | 190 |     |     |
| Met | Val | Gln | Asp | Glu | Val | Ser | Gly | Gln | Leu | Ile | Leu | Thr | Asn | Leu | Ser |
|     |     | 195 |     |     |     |     | 200 |     |     |     |     | 205 |     |     |     |
| Leu | Thr | Ser | Ser | Gly | Thr | Tyr | Arg | Cys | Val | Ala | Thr | Asn | Gln | Met | Gly |
|     | 210 |     |     |     |     | 215 |     |     |     |     | 220 |     |     |     |     |
| Ser | Ala | Ser | Cys | Glu | Leu | Thr | Leu | Ser | Val | Thr | Glu | Pro | Pro | Gln | Gly |
| 225 |     |     |     | 230 |     |     |     |     |     | 235 |     |     |     |     | 240 |
| Arg | Val | Ala | Gly | Ala | Leu | Ile | Gly | Val | Leu | Leu | Gly | Val | Leu | Leu | Leu |
|     |     |     | 245 |     |     |     |     |     | 250 |     |     |     |     | 255 |     |
| Ser | Val | Ala | Ala | Phe | Cys | Leu | Val | Arg | Phe | Gln | Lys | Glu | Arg | Gly | Lys |
|     |     |     | 260 |     |     |     |     | 265 |     |     |     |     | 270 |     |     |
| Lys | Pro | Lys | Glu | Thr | Tyr | Gly | Gly | Ser | Asp | Leu | Arg | Glu | Asp | Ala | Ile |
|     |     | 275 |     |     |     |     | 280 |     |     |     |     | 285 |     |     |     |
| Ala | Pro | Gly | Ile | Ser | Glu | His | Thr | Cys | Met | Arg | Ala | Asp | Ser | Ser | Lys |
|     | 290 |     |     |     |     | 295 |     |     |     |     | 300 |     |     |     |     |
| Gly | Phe | Leu | Glu | Arg | Pro | Ser | Ser | Ala | Ser | Thr | Val | Thr | Thr | Thr | Lys |
| 305 |     |     |     | 310 |     |     |     |     |     | 315 |     |     |     |     | 320 |
| Ser | Lys | Leu | Pro | Met | Val | Val |     |     |     |     |     |     |     |     |     |
|     |     |     |     | 325 |     |     |     |     |     |     |     |     |     |     |     |



<210> 61  
 <211> 92  
 <212> PRT  
 <213> Homo sapiens

<220>  
 <221> SITE  
 <222> (92)  
 <223> Xaa equals stop translation

<400> 61  
 Met Pro Ala Leu Arg His Pro Ala Trp Pro Cys Ile Phe Ser Leu Leu  
           1                  5                  10                  15  
 Met Gly Ile Ser Asn Gly Tyr Phe Gly Ser Val Pro Met Ile Leu Ala  
                   20                  25                  30  
 Ala Gly Lys Val Ser Pro Lys Gln Arg Glu Leu Ala Gly Asn Thr Met  
           35                  40                  45  
 Thr Val Ser Tyr Met Ser Gly Leu Thr Leu Gly Ser Ala Val Ala Tyr  
           50                  55                  60  
 Cys Thr Tyr Ser Leu Thr Arg Asp Ala His Gly Ser Cys Leu His Ala  
           65                  70                  75                  80  
 Ser Thr Ala Asn Gly Ser Ile Leu Ala Gly Leu Xaa  
                   85                  90

<210> 62  
 <211> 58  
 <212> PRT  
 <213> Homo sapiens

<400> 62  
 Met Glu Gly Ile Ile Thr Phe Leu Ile Leu Pro Leu Pro Cys Ser Pro  
           1                  5                  10                  15  
 Gly Cys Pro Val Leu Thr Met Gln Lys Ala Val Ser Cys Thr Leu Glu  
                   20                  25                  30  
 Val Ser Val Leu Leu Ser Trp Gly Leu Gly Tyr Ser Gly Ser Cys Leu  
           35                  40                  45  
 Ser Leu Val Pro Lys Ala Tyr Gln Val Ile  
           50                  55

<210> 63  
 <211> 511  
 <212> PRT  
 <213> Homo sapiens

<220>  
 <221> SITE  
 <222> (135)  
 <223> Xaa equals any of the naturally occurring L-amino acids

&lt;400&gt; 63

Met Val Lys Ile Leu Val Val Thr Val Gln Leu Ile Leu Phe Gly Leu  
 1 5 10 15  
 Ser Asn Gln Leu Ala Val Thr Phe Arg Glu Glu Asn Thr Ile Ala Phe  
 20 25 30  
 Arg His Leu Phe Leu Leu Gly Tyr Ser Asp Gly Ala Asp Asp Thr Phe  
 35 40 45  
 Ala Ala Tyr Thr Arg Glu Gln Leu Tyr Gln Ala Ile Phe His Ala Val  
 50 55 60  
 Asp Gln Tyr Leu Ala Leu Pro Asp Val Ser Leu Gly Arg Tyr Ala Tyr  
 65 70 75 80  
 Val Arg Gly Gly Gly Asp Pro Trp Thr Asn Gly Ser Gly Leu Ala Leu  
 85 90 95  
 Cys Gln Arg Tyr Tyr His Arg Gly His Val Asp Pro Ala Asn Asp Thr  
 100 105 110  
 Phe Asp Ile Asp Pro Met Val Val Thr Asp Cys Ile Gln Val Asp Pro  
 115 120 125  
 Pro Glu Arg Pro Pro Pro Xaa Pro Ser Asp Asp Leu Thr Leu Leu Glu  
 130 135 140  
 Ser Ser Ser Ser Tyr Lys Asn Leu Thr Leu Lys Phe His Lys Leu Val  
 145 150 155 160  
 Asn Val Thr Ile His Phe Arg Leu Lys Thr Ile Asn Leu Gln Ser Leu  
 165 170 175  
 Ile Asn Asn Glu Ile Pro Asp Cys Tyr Thr Phe Ser Val Leu Ile Thr  
 180 185 190  
 Phe Asp Asn Lys Ala His Ser Gly Arg Ile Pro Ile Ser Leu Glu Thr  
 195 200 205  
 Gln Ala His Ile Gln Glu Cys Lys His Pro Ser Val Phe Gln His Gly  
 210 215 220  
 Asp Asn Ser Phe Arg Leu Leu Phe Asp Val Val Val Ile Leu Thr Cys  
 225 230 235 240  
 Ser Leu Ser Phe Leu Leu Cys Ala Arg Ser Leu Leu Arg Gly Phe Leu  
 245 250 255  
 Leu Gln Asn Glu Phe Val Gly Phe Met Trp Arg Gln Arg Gly Arg Val  
 260 265 270  
 Ile Ser Leu Trp Glu Arg Leu Glu Phe Val Asn Gly Trp Tyr Ile Leu  
 275 280 285  
 Leu Val Thr Ser Asp Val Leu Thr Ile Ser Gly Thr Ile Met Lys Ile  
 290 295 300

Gly Ile Glu Ala Lys Asn Leu Ala Ser Tyr Asp Val Cys Ser Ile Leu  
 305 310 315 320  
 Leu Gly Thr Ser Thr Leu Leu Val Trp Val Gly Val Ile Arg Tyr Leu  
 325 330 335  
 Thr Phe Phe His Asn Tyr Asn Ile Leu Ile Ala Thr Leu Arg Val Ala  
 340 345 350  
 Leu Pro Ser Val Met Arg Phe Cys Cys Cys Val Ala Val Ile Tyr Leu  
 355 360 365  
 Gly Tyr Cys Phe Cys Gly Trp Ile Val Leu Gly Pro Tyr His Val Lys  
 370 375 380  
 Phe Arg Ser Leu Ser Met Val Ser Glu Cys Leu Phe Ser Leu Ile Asn  
 385 390 395 400  
 Gly Asp Asp Met Phe Val Thr Phe Ala Ala Met Gln Ala Gln Gln Gly  
 405 410 415  
 Arg Ser Ser Leu Val Trp Leu Phe Ser Gln Leu Tyr Leu Tyr Ser Phe  
 420 425 430  
 Ile Ser Leu Phe Ile Tyr Met Val Leu Ser Leu Phe Ile Ala Leu Ile  
 435 440 445  
 Thr Gly Ala Tyr Asp Thr Ile Lys His Pro Gly Gly Ala Gly Ala Glu  
 450 455 460  
 Glu Ser Glu Leu Gln Ala Tyr Ile Ala Gln Cys Gln Asp Ser Pro Thr  
 465 470 475 480  
 Ser Gly Lys Phe Arg Arg Gly Ser Ala Arg Ala Cys Ser Leu Leu Cys  
 485 490 495  
 Cys Cys Gly Arg Asp Pro Ser Glu Glu His Ser Leu Leu Val Asn  
 500 505 510

<210> 64

<211> 91

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (91)

<223> Xaa equals stop translation

<400> 64

Met Asn Trp Ser Phe Leu Cys Met Cys Leu Ala Cys Phe Pro Leu Asp  
 1 5 10 15

Leu Val Leu Gly Val Arg Tyr Ala Ile Glu Asp Cys Val Phe Leu Phe  
 20 25 30

His Leu Ser Pro Val Arg Gly Ala Leu Ile Leu Cys Pro Lys Leu Pro  
 35 40 45

Pro Trp Pro Trp Arg Cys Phe Cys Gly Leu Val Gly Phe Pro Cys Ala  
 50 55 60

His Ala Cys Pro Leu Ser Asp Ser Gly Phe Ala Ser Pro Cys Gln Ser  
 65 70 75 80

Val Pro Arg Leu Leu Thr Ala Leu Ala Arg Xaa  
 85 90

<210> 65  
 <211> 114  
 <212> PRT  
 <213> Homo sapiens

<220>  
 <221> SITE  
 <222> (114)  
 <223> Xaa equals stop translation

<400> 65  
 Met Ala Ile Trp Val Val Phe Ile Tyr Trp Leu Leu Leu Val Phe Cys  
 1 5 10 15

Glu His Ser Cys Ile Ser Phe Arg Val Asp Val Cys Ile His Phe Ser  
 20 25 30

Cys Asn Lys Phe Tyr Leu Gly Val Glu Leu Leu Asp His Met Ala Ala  
 35 40 45

Leu Leu Thr Leu Trp Gly Thr Ala Arg Leu Leu Phe Lys Val Ser Ala  
 50 55 60

Pro Cys Ser Leu Ser Ser Ala Val Tyr Asp Gly Ser Val Ser Ser Gln  
 65 70 75 80

Pro His Gln Tyr Leu Phe Ser Val Cys Arg Trp Gly Leu Leu Glu His  
 85 90 95

His His Ile His Ser Phe Thr Tyr Tyr Leu Trp Leu Leu Leu Gln Tyr  
 100 105 110

Ser Xaa

<210> 66  
 <211> 51  
 <212> PRT  
 <213> Homo sapiens

<220>  
 <221> SITE  
 <222> (51)  
 <223> Xaa equals stop translation

<400> 66  
 Met Thr Phe Gly Ile Val Val Asp Leu Thr Pro Val Phe Val Leu Val



<210> 68  
 <211> 311  
 <212> PRT  
 <213> Homo sapiens

<220>  
 <221> SITE  
 <222> (256)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<400> 68  
 Met Gly Val Met Ala Met Leu Met Leu Pro Leu Leu Leu Leu Gly Ile  
   1                  5                  10                  15  
 Ser Gly Leu Leu Phe Ile Tyr Gln Glu Val Ser Arg Leu Trp Ser Lys  
           20                  25                  30  
 Ser Ala Val Gln Asn Lys Val Val Val Ile Thr Asp Ala Ile Ser Gly  
       35                  40                  45  
 Leu Gly Lys Glu Cys Ala Arg Val Phe His Thr Gly Gly Ala Arg Leu  
       50                  55                  60  
 Val Leu Cys Gly Lys Asn Trp Glu Arg Leu Glu Asn Leu Tyr Asp Ala  
       65                  70                  75                  80  
 Leu Ile Ser Val Ala Asp Pro Ser Lys Thr Phe Thr Pro Lys Leu Val  
           85                  90                  95  
 Leu Leu Asp Leu Ser Asp Ile Ser Cys Val Pro Asp Val Ala Lys Glu  
          100                 105                 110  
 Val Leu Asp Cys Tyr Gly Cys Val Asp Ile Leu Ile Asn Asn Ala Ser  
      115                 120                 125  
 Val Lys Val Lys Gly Pro Ala His Lys Ile Ser Leu Glu Leu Asp Lys  
      130                 135                 140  
 Lys Ile Met Asp Ala Asn Tyr Phe Gly Pro Ile Thr Leu Thr Lys Ala  
      145                 150                 155                 160  
 Leu Leu Pro Asn Met Ile Ser Arg Arg Thr Gly Gln Ile Val Leu Val  
          165                 170                 175  
 Asn Asn Ile Gln Gly Lys Phe Gly Ile Pro Phe Arg Thr Thr Tyr Ala  
          180                 185                 190  
 Ala Ser Lys His Ala Ala Leu Gly Phe Phe Asp Cys Leu Arg Ala Glu  
      195                 200                 205  
 Val Glu Glu Tyr Asp Val Val Ile Ser Thr Val Ser Pro Thr Phe Ile  
      210                 215                 220  
 Arg Ser Tyr His Val Tyr Pro Glu Gln Gly Asn Trp Glu Ala Ser Ile  
      225                 230                 235                 240  
 Trp Lys Phe Phe Phe Arg Lys Leu Thr Tyr Gly Val His Pro Val Xaa

|   |     |  |     |  |     |
|---|-----|--|-----|--|-----|
|   | 245 |  | 250 |  | 255 |
| Val Ala Glu Glu Val Met Arg Thr Val Arg Arg Lys Lys Gln Glu Val | 260 |  | 265 |  | 270 |
| Phe Met Ala Asn Pro Ile Pro Lys Ala Ala Val Tyr Val Arg Thr Phe | 275 |  | 280 |  | 285 |
| Phe Pro Glu Phe Phe Phe Ala Val Val Ala Cys Gly Val Lys Glu Lys | 290 |  | 295 |  | 300 |
| Leu Asn Val Pro Glu Glu Gly                                     | 305 |  | 310 |  |     |

<210> 69  
 <211> 414  
 <212> PRT  
 <213> Homo sapiens

<220>  
 <221> SITE  
 <222> (414)  
 <223> Xaa equals stop translation

<400> 69  
 Met Arg Arg Gly Cys Ala Val Leu Gly Ala Leu Gly Leu Leu Ala Gly  
 1 5 10 15

Ala Gly Val Gly Ser Trp Leu Leu Val Leu Tyr Leu Cys Pro Ala Ala  
 20 25 30

Ser Gln Pro Ile Ser Gly Thr Leu Gln Asp Glu Glu Ile Thr Leu Ser  
 35 40 45

Cys Ser Glu Ala Ser Ala Glu Glu Ala Leu Leu Pro Ala Leu Pro Lys  
 50 55 60

Thr Val Ser Phe Arg Ile Asn Ser Glu Asp Phe Leu Leu Glu Ala Gln  
 65 70 75 80

Val Arg Asp Gln Pro Arg Trp Leu Leu Val Cys His Glu Gly Trp Ser  
 85 90 95

Pro Ala Leu Gly Leu Gln Ile Cys Trp Ser Leu Gly His Leu Arg Leu  
 100 105 110

Thr His His Lys Gly Val Asn Leu Thr Asp Ile Lys Leu Asn Ser Ser  
 115 120 125

Gln Glu Phe Ala Gln Leu Ser Pro Arg Leu Gly Gly Phe Leu Glu Glu  
 130 135 140

Ala Trp Gln Pro Arg Asn Asn Cys Thr Ser Gly Gln Val Val Ser Leu  
 145 150 155 160

Arg Cys Ser Glu Cys Gly Ala Arg Pro Leu Ala Ser Arg Ile Val Gly  
 165 170 175

Gly Gln Ser Val Ala Pro Gly Arg Trp Pro Trp Gln Ala Ser Val Ala  
 180 185 190  
 Leu Gly Phe Arg His Thr Cys Gly Gly Ser Val Leu Ala Pro Arg Trp  
 195 200 205  
 Val Val Thr Ala Ala His Cys Met His Ser Phe Arg Leu Ala Arg Leu  
 210 215 220  
 Ser Ser Trp Arg Val His Ala Gly Leu Val Ser His Ser Ala Val Arg  
 225 230 235 240  
 Pro His Gln Gly Ala Leu Val Glu Arg Ile Ile Pro His Pro Leu Tyr  
 245 250 255  
 Ser Ala Gln Asn His Asp Tyr Asp Val Ala Leu Leu Arg Leu Gln Thr  
 260 265 270  
 Ala Leu Asn Phe Ser Asp Thr Val Gly Ala Val Cys Leu Pro Ala Lys  
 275 280 285  
 Glu Gln His Phe Pro Lys Gly Ser Arg Cys Trp Val Ser Gly Trp Gly  
 290 295 300  
 His Thr His Pro Ser His Thr Tyr Ser Ser Asp Met Leu Gln Asp Thr  
 305 310 315 320  
 Val Val Pro Leu Phe Ser Thr Gln Leu Cys Asn Ser Ser Cys Val Tyr  
 325 330 335  
 Ser Gly Ala Leu Thr Pro Arg Met Leu Cys Ala Gly Tyr Leu Asp Gly  
 340 345 350  
 Arg Ala Asp Ala Cys Gln Gly Asp Ser Gly Gly Pro Leu Val Cys Pro  
 355 360 365  
 Asp Gly Asp Thr Trp Arg Leu Val Gly Val Val Ser Trp Gly Arg Gly  
 370 375 380  
 Cys Ala Glu Pro Asn His Pro Gly Val Tyr Ala Lys Val Ala Glu Phe  
 385 390 395 400  
 Leu Asp Trp Ile His Asp Thr Ala Gln Asp Ser Leu Leu Xaa  
 405 410

<210> 70  
 <211> 61  
 <212> PRT  
 <213> Homo sapiens

<220>  
 <221> SITE  
 <222> (61)  
 <223> Xaa equals stop translation

<400> 70  
 Met Val Ala Tyr Ser Val Gln Val Leu Ala Val Phe Ile Ser Cys Ala  
 1 5 10 15



Ile Leu Thr Leu Ala Met Lys Ile Ala Trp Ile Phe Gly Leu Asn Ser  
                   20                  25                  30

Val Gln Asn Ile Thr Ala Asn Leu Ser Val Asp Gly Ser Thr Ser Gly  
                   35                  40                  45

Asn Pro Ile Gln Lys Trp Lys Val Ile Trp Ser Leu Xaa  
           50                  55                  60

<210> 71  
 <211> 69  
 <212> PRT  
 <213> Homo sapiens

<220>  
 <221> SITE  
 <222> (69)  
 <223> Xaa equals stop translation

<400> 71  
 Met Ala Ala Pro Leu Val Leu Val Leu Val Ala Val Thr Val Arg  
       1                  5                  10                  15

Ala Ala Leu Phe Arg Ser Ser Leu Ala Glu Phe Ile Ser Glu Arg Val  
           20                  25                  30

Glu Val Val Ser Pro Leu Ser Ser Trp Lys Arg Val Val Glu Gly Leu  
           35                  40                  45

Ser Leu Leu Gly Leu Gly Ser Ile Ser Val Phe Trp Ser Ser Ile Ser  
       50                  55                  60

Trp Lys Leu His Xaa  
       65

<210> 72  
 <211> 299  
 <212> PRT  
 <213> Homo sapiens

<220>  
 <221> SITE  
 <222> (87)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (299)  
 <223> Xaa equals stop translation

<400> 72  
 Met Phe Phe Phe Phe Asp Ser Val Gln Val Val Phe Thr Ile Cys Thr  
       1                  5                  10                  15

Ala Val Leu Ala Thr Ile Ala Phe Ala Phe Leu Leu Leu Pro Met Cys  
           20                  25                  30

[illegible]

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<210> 73
<211> 56
<212> PRT
<213> Homo sapiens
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 $\langle 220 \rangle$

<221> SITE

<222> (56)

<223> Xaa equals stop translation

<400> 73

Met Pro Gly Gly Arg Asp Gly Leu Leu Tyr Leu Tyr His Gly Tyr Ser  
1 5 10 15

Ala Leu Leu Leu Trp Pro Val Ala Phe Leu His Leu Leu Phe Leu Ile  
20 25 30

Leu Leu Gly Met Cys Phe Ala Cys Cys Ile Pro Thr Ser Ser Ala Pro  
35 40 45

Leu His Thr Pro Trp Leu Ala Xaa  
50 55

<210> 74

<211> 288

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (288)

<223> Xaa equals stop translation

<400> 74

Met Arg Pro Asp Pro Arg Leu Lys Trp Ala Val Leu Val Leu Val Leu  
1 5 10 15

Val Gln Met Leu Ala Cys Trp Leu Val Arg Gly Leu Ala Trp Arg Trp  
20 25 30

Leu Leu Phe Trp Ala Tyr Ala Phe Gly Gly Cys Val Asn His Ser Leu  
35 40 45

Thr Leu Ala Ile His Asp Ile Ser His Asn Ala Ala Phe Gly Thr Gly  
50 55 60

Arg Ala Ala Arg Asn Arg Trp Leu Ala Val Phe Ala Asn Leu Pro Val  
65 70 75 80

Gly Val Pro Tyr Ala Ala Ser Phe Lys Lys Tyr His Val Asp His His  
85 90 95

Arg Tyr Leu Gly Gly Asp Gly Leu Asp Val Asp Val Pro Thr Arg Leu  
100 105 110

Glu Gly Trp Phe Phe Cys Thr Pro Ala Arg Lys Leu Leu Trp Leu Val  
115 120 125

Leu Gln Pro Phe Phe Tyr Ser Leu Arg Pro Leu Cys Val His Pro Lys  
130 135 140

Ala Val Thr Arg Met Glu Val Leu Asn Thr Leu Val Gln Leu Ala Ala  
145 150 155 160

Asp Leu Ala Ile Phe Ala Leu Trp Gly Leu Lys Pro Val Val Tyr Leu  
                           165                          170                          175  
 Leu Ala Ser Ser Phe Leu Gly Leu Gly Leu His Pro Ile Ser Gly His  
                           180                          185                          190  
 Phe Val Ala Glu His Tyr Met Phe Leu Lys Gly His Glu Thr Tyr Ser  
                           195                          200                          205  
 Tyr Tyr Gly Pro Leu Asn Trp Ile Thr Phe Asn Val Gly Tyr His Val  
                           210                          215                          220  
 Glu His His Asp Phe Pro Ser Ile Pro Gly Tyr Asn Leu Pro Leu Val  
                           225                          230                          235                          240  
 Arg Lys Ile Ala Pro Glu Tyr Tyr Asp His Leu Pro Gln His His Ser  
                           245                          250                          255  
 Trp Val Lys Val Leu Trp Asp Phe Val Phe Glu Asp Ser Leu Gly Pro  
                           260                          265                          270  
 Tyr Ala Arg Val Lys Arg Val Tyr Arg Leu Ala Lys Asp Gly Leu Xaa  
                           275                          280                          285

<210> 75

<211> 58

<212> PRT

<213> Homo sapiens

<220>

<221> SITE

<222> (37)

<223> Xaa equals any of the naturally occurring L-amino acids

<220>

<221> SITE

<222> (58)

<223> Xaa equals stop translation

<400> 75

Met Asp Met Lys Trp Phe Leu Ile Val Val Leu Ile Cys Ile Pro Leu  
   1                          5                          10                          15

Met Thr Ser Asp Ile Glu His Leu Phe Met Cys Leu Leu Pro Phe His  
                           20                          25                          30

Val Ser Ser Leu Xaa Lys Cys Leu Phe Lys Ser Phe Ala His Phe Ser  
                           35                          40                          45

Val Gly Leu Tyr Phe Val Val Glu Phe Xaa  
                           50                          55

<210> 76

<211> 59

<212> PRT  
 <213> Homo sapiens

<220>  
 <221> SITE  
 <222> (59)  
 <223> Xaa equals stop translation

<400> 76  
 Met Ala Leu Val Trp Leu Cys Phe Leu Asn Ser Val Glu Gly Phe Gly  
           1                  5                  10                  15  
 Val Ser Arg Ala Pro Pro Leu Ser Pro Pro Leu Glu Glu Asn Ala Gln  
                   20                  25                  30  
 Asp Ser Gly Ala Ser Phe Arg Tyr Arg Lys Thr Lys Ile Ala Leu Phe  
           35                  40                  45  
 Trp Thr Gln Phe Ser Val Thr Ser Ser Leu Xaa  
           50                  55

<210> 77  
 <211> 51  
 <212> PRT  
 <213> Homo sapiens

<220>  
 <221> SITE  
 <222> (51)  
 <223> Xaa equals stop translation

<400> 77  
 Met Leu Asn Phe Leu Leu Ser Asn Ser Leu Leu Leu Thr Ile Val Ser  
           1                  5                  10                  15  
 Ile Val Leu Leu Phe Leu Val Leu Val Thr Cys Gly Thr Val Gln Glu  
                   20                  25                  30  
 Asp Glu Arg Glu Arg Glu Arg Asp His Ser Cys Asn Phe Tyr Tyr Ser  
           35                  40                  45  
 Ile Leu Xaa  
           50

<210> 78  
 <211> 197  
 <212> PRT  
 <213> Homo sapiens

<400> 78  
 Met Gly Val Pro Leu Gly Leu Gly Ala Ala Trp Leu Leu Ala Trp Pro  
           1                  5                  10                  15  
 Gly Leu Ala Leu Pro Leu Val Ala Met Ala Ala Gly Gly Arg Trp Val  
                   20                  25                  30  
 Arg Gln Gln Gly Pro Arg Val Arg Arg Gly Ile Ser Arg Leu Trp Leu

35                                      40                                      45  
 Arg Val Leu Leu Arg Leu Ser Pro Met Ala Phe Arg Ala Leu Gln Gly  
     50                                      55                                      60  
 Cys Gly Ala Val Gly Asp Arg Gly Leu Phe Ala Leu Tyr Pro Lys Thr  
     65                                      70                                      75                                      80  
 Asn Lys Asp Gly Phe Arg Ser Arg Leu Pro Val Pro Gly Pro Arg Arg  
                     85                                      90                                      95  
 Arg Asn Pro Arg Thr Thr Gln His Pro Leu Ala Leu Leu Ala Arg Val  
                     100                                      105                                      110  
 Trp Val Leu Cys Lys Gly Trp Asn Trp Arg Leu Ala Arg Ala Ser Gln  
                     115                                      120                                      125  
 Gly Leu Ala Ser His Leu Pro Pro Trp Ala Ile His Thr Leu Ala Ser  
                     130                                      135                                      140  
 Trp Gly Leu Leu Arg Gly Glu Arg Pro Thr Arg Ile Pro Arg Leu Leu  
     145                                      150                                      155                                      160  
 Pro Arg Ser Gln Arg Gln Leu Gly Pro Pro Ala Ser Arg Gln Pro Leu  
                     165                                      170                                      175  
 Pro Gly Thr Leu Ala Gly Arg Arg Ser Arg Thr Arg Gln Ser Arg Ala  
                     180                                      185                                      190  
 Leu Pro Pro Trp Arg  
                     195

<210> 79  
 <211> 63  
 <212> PRT  
 <213> Homo sapiens

<220>  
 <221> SITE  
 <222> (51)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (63)  
 <223> Xaa equals stop translation

<400> 79  
 Met Trp Ser Leu Val Ser Val Ser Val Leu Val Leu Thr Cys Ala Val  
     1                                      5                                      10                                      15  
 Asp Val Ala Glu Gly Leu Gly Trp Gly Glu Val Ser Thr Gly Gly Ile  
                     20                                      25                                      30  
 Glu Leu Pro Arg His Met Val Leu Val Val Leu Val Glu Arg Glu Ser  
                     35                                      40                                      45  
 Gln Arg Xaa Arg Thr Cys Ser Val Lys Thr Phe Ser Ser Arg Xaa

50

55

60

<210> 80  
 <211> 103  
 <212> PRT  
 <213> Homo sapiens

<220>  
 <221> SITE  
 <222> (70)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>  
 <221> SITE  
 <222> (103)  
 <223> Xaa equals stop translation

<400> 80  
 Met Met Ile Ser Ile Val Gly Phe Leu Ser Pro Phe Asn Met Ile Leu  
   1                  5                  10                  15  
 Gly Gly Ile Val Val Val Leu Val Phe Thr Gly Phe Val Trp Ala Ala  
                   20                  25                  30  
 His Asn Lys Asp Val Leu Arg Arg Met Lys Lys Arg Tyr Pro Thr Thr  
           35                  40                  45  
 Phe Val Met Val Val Met Leu Ala Ser Tyr Phe Leu Ile Ser Met Phe  
   50                  55                  60  
 Gly Gly Val Met Val Xaa Val Phe Gly Ile Thr Phe Pro Leu Leu Leu  
   65                  70                  75                  80  
 Met Phe Ile His Ala Ser Leu Arg Leu Arg Asn Leu Lys Asn Lys Leu  
                   85                  90                  95  
 Glu Asn Lys Met Glu Gly Xaa  
                   100

<210> 81  
 <211> 123  
 <212> PRT  
 <213> Homo sapiens

<400> 81  
 Met Ile Leu Gly Gly Ile Val Val Val Leu Val Phe Thr Gly Phe Val  
   1                  5                  10                  15  
 Trp Ala Ala His Asn Lys Asp Val Leu Arg Arg Met Lys Lys Arg Tyr  
           20                  25                  30  
 Pro Thr Thr Phe Val Met Val Val Met Leu Ala Ser Tyr Phe Leu Ile  
           35                  40                  45  
 Ser Met Phe Gly Gly Val Met Val Phe Val Phe Gly Ile Thr Phe Pro  
   50                  55                  60

Leu Leu Leu Met Phe Ile His Ala Ser Leu Arg Leu Arg Asn Leu Lys  
 65 70 75 80  
 Asn Lys Leu Glu Asn Lys Met Glu Gly Ile Gly Leu Lys Arg Thr Pro  
 85 90 95  
 Met Gly Ile Val Leu Asp Ala Leu Glu Gln Gln Glu Glu Gly Ile Asn  
 100 105 110  
 Arg Leu Thr Asp Tyr Ile Ser Lys Val Lys Glu  
 115 120

<210> 82  
 <211> 73  
 <212> PRT  
 <213> Homo sapiens

<220>  
 <221> SITE  
 <222> (73)  
 <223> Xaa equals stop translation

<400> 82  
 Met Pro Leu Thr Leu Leu Ile Leu Ser Cys Leu Ala Asp Trp Thr Met  
 1 5 10 15  
 Ala Glu Ala Glu Gly Asn Ala Ser Cys Thr Val Ser Leu Gly Gly Ala  
 20 25 30  
 Asn Met Ala Glu Thr His Lys Ala Met Ile Leu Gln Leu Asn Pro Ser  
 35 40 45  
 Glu Asn Cys Thr Trp Thr Ile Glu Arg Pro Glu Asn Lys Ser Ile Arg  
 50 55 60  
 Ile Ile Phe Ser Tyr Val Pro Ala Xaa  
 65 70

<210> 83  
 <211> 246  
 <212> PRT  
 <213> Homo sapiens

<220>  
 <221> SITE  
 <222> (246)  
 <223> Xaa equals stop translation

<400> 83  
 Met Ala Glu Leu Pro Gly Pro Phe Leu Cys Gly Ala Leu Leu Gly Phe  
 1 5 10 15  
 Leu Cys Leu Ser Gly Leu Ala Val Glu Val Lys Val Pro Thr Glu Pro  
 20 25 30  
 Leu Ser Thr Pro Leu Gly Lys Thr Ala Glu Leu Thr Cys Thr Tyr Ser  
 35 40 45



Thr Ser Val Gly Asp Ser Phe Ala Leu Glu Trp Ser Phe Val Gln Pro  
 50 55 60  
 Gly Lys Pro Ile Ser Glu Ser His Pro Ile Leu Tyr Phe Thr Asn Gly  
 65 70 75 80  
 His Leu Tyr Pro Thr Gly Ser Lys Ser Lys Arg Val Ser Leu Leu Gln  
 85 90 95  
 Asn Pro Pro Thr Val Gly Val Ala Thr Leu Lys Leu Thr Asp Val His  
 100 105 110  
 Pro Ser Asp Thr Gly Thr Tyr Leu Cys Gln Val Asn Asn Pro Pro Asp  
 115 120 125  
 Phe Tyr Thr Asn Gly Leu Gly Leu Ile Asn Leu Thr Val Leu Val Pro  
 130 135 140  
 Pro Ser Asn Pro Leu Cys Ser Gln Ser Gly Gln Thr Ser Val Gly Gly  
 145 150 155 160  
 Ser Thr Ala Leu Arg Cys Ser Ser Ser Glu Gly Ala Pro Lys Pro Val  
 165 170 175  
 Tyr Asn Trp Val Arg Leu Gly Thr Phe Pro Thr Pro Ser Pro Gly Ser  
 180 185 190  
 Met Val Gln Asp Glu Val Ser Gly Gln Leu Ile Leu Thr Asn Leu Ser  
 195 200 205  
 Leu Thr Ser Ser Gly Thr Tyr Arg Cys Val Ala Thr Asn Gln Met Gly  
 210 215 220  
 Ser Ala Ser Cys Glu Leu Thr Leu Ser Val Thr Glu Pro Ser Gln Gly  
 225 230 235 240  
 Arg Val Ala Glu Leu Xaa  
 245

<210> 84  
 <211> 167  
 <212> PRT  
 <213> Homo sapiens

<220>  
 <221> SITE  
 <222> (167)  
 <223> Xaa equals stop translation

<400> 84  
 Met Gly Val Pro Leu Gly Leu Gly Ala Ala Trp Leu Leu Ala Trp Pro  
 1 5 10 15  
 Gly Leu Ala Leu Pro Leu Val Ala Met Ala Ala Gly Gly Arg Trp Val  
 20 25 30  
 Arg Gln Gln Gly Pro Arg Val Arg Arg Gly Ile Ser Arg Leu Trp Leu

|   |     |     |
|---|-----|-----|
| 35  | 40  | 45  |
| Arg Val Leu Leu Arg Leu Ser Pro Met Ala Phe Arg Ala Leu Gln Gly |     |     |
| 50  | 55  | 60  |
| Cys Gly Ala Val Gly Asp Arg Gly Leu Phe Ala Leu Tyr Pro Lys Thr |     |     |
| 65  | 70  | 75  |
| Asn Lys Asp Gly Phe Arg Ser Arg Leu Pro Val Pro Gly Pro Arg Arg |     |     |
|   | 85  | 90  |
| Arg Asn Pro Arg Thr Thr Gln His Pro Leu Ala Leu Leu Ala Arg Val |     |     |
|   | 100 | 105 |
| Trp Val Leu Cys Lys Gly Trp Asn Trp Arg Leu Ala Arg Ala Ser Gln |     |     |
|   | 115 | 120 |
| Gly Leu Ala Ser His Leu Pro Pro Trp Ala Ile His Thr Leu Ala Ser |     |     |
|   | 130 | 135 |
| Trp Gly Leu Leu Arg Gly Glu Arg Pro Pro Glu Ser Pro Gly Tyr Tyr |     |     |
|   | 145 | 150 |
|   |     | 155 |
| His Ala Ala Ser Ala Ser Xaa                                     |     |     |
|   | 165 |     |

<210> 85  
 <211> 122  
 <212> PRT  
 <213> Homo sapiens

|   |
|---|
| <400> 85  |
| Pro Pro Ala Leu Gly Pro Val Ser Pro Gly Ala Ser Gly Ser Pro Gly |
| 1 5 10 15   |
| Pro Val Ala Ala Ala Pro Ser Ser Leu Val Ala Ala Ala Ala Ser Val |
| 20 25 30  |
| Ala Ala Ala Ala Gly Gly Asp Leu Gly Trp Met Ala Glu Thr Ala Ala |
| 35 40 45  |
| Ile Ile Thr Asp Ala Ser Phe Leu Ser Gly Leu Ser Ala Ser Leu Leu |
| 50 55 60  |
| Glu Arg Arg Pro Ala Ser Pro Leu Gly Pro Ala Gly Gly Leu Pro His |
| 65 70 75 80   |
| Ala Pro Gln Asp Ser Val Pro Pro Ser Asp Ser Ala Ala Ser Asp Thr |
| 85 90 95  |
| Thr Pro Leu Gly Ala Ala Val Gly Gly Pro Ser Pro Ala Ser Met Ala |
| 100 105 110   |
| Pro Thr Glu Ala Pro Ser Glu Val Gly Ser                         |
| 115 120   |

<210> 86

&lt;211&gt; 346

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 86

Lys Ser Val Lys Leu Val Arg Leu Gln Val Pro Val Arg Asn Ser Arg  
 1 5 10 15

Val Asp Pro Arg Val Arg Lys Gly Phe Leu Arg Asn Val Val Ser Gly  
 20 25 30

Glu His Tyr Arg Phe Val Ser Met Trp Met Ala Arg Thr Ser Tyr Leu  
 35 40 45

Ala Ala Phe Ala Ile Met Val Ile Phe Thr Leu Ser Val Ser Met Leu  
 50 55 60

Leu Arg Tyr Ser His His Gln Ile Phe Val Phe Ile Ala Pro Leu Leu  
 65 70 75 80

Thr Val Ile Leu Ala Leu Val Gly Met Glu Ala Ile Met Ser Glu Phe  
 85 90 95

Phe Asn Asp Thr Thr Thr Ala Phe Tyr Ile Ile Leu Ile Val Trp Leu  
 100 105 110

Ala Asp Gln Tyr Asp Ala Ile Cys Cys His Thr Ser Thr Ser Lys Arg  
 115 120 125

His Trp Leu Arg Phe Phe Tyr Leu Tyr His Phe Ala Phe Tyr Ala Tyr  
 130 135 140

His Tyr Arg Phe Asn Gly Gln Tyr Ser Ser Leu Ala Leu Val Thr Ser  
 145 150 155 160

Trp Leu Phe Ile Gln His Ser Met Ile Tyr Phe Phe His His Tyr Glu  
 165 170 175

Leu Pro Ala Ile Leu Gln Gln Val Arg Ile Gln Glu Met Leu Leu Gln  
 180 185 190

Ala Pro Pro Leu Gly Pro Gly Thr Pro Thr Ala Leu Pro Asp Asp Met  
 195 200 205

Asn Asn Asn Ser Gly Ala Pro Ala Thr Ala Pro Asp Ser Ala Gly Gln  
 210 215 220

Pro Pro Ala Leu Gly Pro Val Ser Pro Gly Ala Ser Gly Ser Pro Gly  
 225 230 235 240

Pro Val Ala Ala Ala Pro Ser Ser Leu Val Ala Ala Ala Ala Ser Val  
 245 250 255

Ala Ala Ala Ala Gly Gly Asp Leu Gly Trp Met Ala Glu Thr Ala Ala  
 260 265 270

Ile Ile Thr Asp Ala Ser Phe Leu Ser Gly Leu Ser Ala Ser Leu Leu  
 275 280 285

Glu Arg Arg Pro Ala Ser Pro Leu Gly Pro Ala Gly Gly Leu Pro His  
 290 295 300

Ala Pro Gln Asp Ser Val Pro Pro Ser Asp Ser Ala Ala Ser Asp Thr  
 305 310 315 320

Thr Pro Leu Gly Ala Ala Val Gly Gly Pro Ser Pro Ala Ser Met Ala  
 325 330 335

Pro Thr Glu Ala Pro Ser Glu Val Gly Ser  
 340 345

<210> 87

<211> 259

<212> PRT

<213> Homo sapiens

<400> 87

Met Gly Pro His Ser Ile Leu Arg Thr Val His Cys Arg Pro Thr Lys  
 1 5 10 15

Thr Pro Pro Glu Pro Ser Ala Glu Pro His Pro Leu Ser Leu Leu Thr  
 20 25 30

Ser Ser Asn Thr Ser Leu Ala Gly Thr Ser Leu Gly Arg Asp Leu Thr  
 35 40 45

Pro Gly Gly Gly Lys Pro Pro Ser Gly Gln Thr Pro Arg Asn Pro Glu  
 50 55 60

Ser Pro Arg His Arg Leu Gly Ser Pro Arg Gly Arg Arg Trp Leu Ala  
 65 70 75 80

Ser Pro Thr Pro Thr Gly Ser Gly Arg Ser Gly Pro Ala Ser Arg Gly  
 85 90 95

Gln Arg Arg Leu Ser Cys Ala Ala Gln Asp Pro Thr Ser Glu Gly Ala  
 100 105 110

Ser Val Gly Ala Met Glu Ala Gly Leu Gly Pro Pro Thr Ala Ala Pro  
 115 120 125

Arg Gly Val Val Ser Glu Ala Ala Glu Ser Leu Gly Gly Thr Leu Ser  
 130 135 140

Trp Gly Ala Trp Gly Arg Pro Pro Ala Gly Pro Ser Gly Leu Ala Gly  
 145 150 155 160

Arg Arg Ser Arg Arg Glu Ala Leu Arg Pro Asp Arg Lys Glu Ala Ser  
 165 170 175

Val Met Met Ala Ala Val Ser Ala Ile Gln Pro Arg Ser Pro Pro Ala  
 180 185 190

Ala Ala Ala Thr Glu Ala Ala Ala Thr Arg Glu Leu Gly Ala Ala  
 195 200 205

Ala Thr Gly Pro Gly Leu Pro Leu Ala Pro Gly Glu Thr Gly Pro Arg

|                     |                         |                         |     |     |
|---------------------|-------------------------|-------------------------|-----|-----|
| 210                 |                         | 215                     |     | 220 |
| Ala Gly Gly Trp Pro | Ala Glu Ser Gly Ala Val | Ala Gly Ala Pro Glu     |     |     |
| 225                 | 230                     | 235                     | 240 |     |
| Leu Leu Phe Met Ser | Ser Gly Ser Ala Val     | Gly Val Pro Gly Pro Ser |     |     |
|                     | 245                     | 250                     | 255 |     |
| Gly Gly Ala         |                         |                         |     |     |

<210> 88  
 <211> 169  
 <212> PRT  
 <213> Homo sapiens

|   |     |
|---|-----|
| <400> 88  |     |
| Met Ser Ala Pro Pro His Ser Ser Pro Ser Asp Trp Phe Gly Arg Arg |     |
| 1   | 15  |
| Pro Thr Pro Ser Pro Ser Gly Thr Gly Pro Arg Pro Trp Leu Leu Pro |     |
| 20  | 30  |
| Leu Met Leu Ala Pro Ala Pro His Val Pro Met Pro Glu Ala Gln Ala |     |
| 35  | 45  |
| Leu Leu Ser Arg Gly Pro Gln Ala Trp Arg Thr Arg Gly Glu Gly Gly |     |
| 50  | 60  |
| Ala Met Glu Lys Ala Leu Gln Gly Ala Pro Gly Arg Ala Gly Leu Arg |     |
| 65  | 80  |
| Pro Ala Gly Thr Arg Ala Arg Gly Pro Thr Pro Ser Arg Pro Leu Leu |     |
| 85  | 95  |
| His Thr Ser Ala Leu Leu Arg Asp Leu His His Gly Thr Pro Leu His |     |
| 100   | 110 |
| Pro Gln Asp Gly Ser Leu Gln Thr Tyr Gln Asp Pro Ser Arg Thr Phe |     |
| 115   | 125 |
| Arg Gly Thr Pro Pro Pro Leu Leu Ala Asp Gln Leu Lys His Leu Thr |     |
| 130   | 140 |
| Ser Gly Tyr Lys Pro Arg Ala Arg Pro His Thr Arg Gly Arg Lys Ala |     |
| 145   | 160 |
| Ala Phe Arg Ala Asn Pro Thr Lys Pro                             |     |
| 165   |     |

<210> 89  
 <211> 387  
 <212> PRT  
 <213> Homo sapiens

|   |
|---|
| <400> 89  |
| Met Arg Arg Ser Thr His Leu Ser Met Pro Leu Trp Pro His Leu Gly |

| 1   | 5   | 10  | 15  |
|---|-----|-----|-----|
| Gly Gly Asp Arg Arg Gly Gly Arg Gly Lys Gly Glu Gly Gln Glu Gly | 20  | 25  | 30  |
| Phe Met Gly His Leu Leu Cys Ala Arg Pro Cys Ala Gln Leu Trp Ala | 35  | 40  | 45  |
| Arg Gln Ser Arg Glu Val Gly Gly Ser Pro Gly Ser Gln Cys Gly Glu | 50  | 55  | 60  |
| Ala Gly Trp Gly Leu Cys Lys Gly Ala Phe Ser Ile Thr Leu Pro Thr | 65  | 70  | 75  |
| Leu Cys Pro Gln Leu Arg Ile Gln Leu Gly Gly Ser Met Val Ser Met | 85  | 90  | 95  |
| Ser Gly Cys Arg Arg Lys Cys Arg Lys Gln Val Val Gln Lys Ala Cys | 100 | 105 | 110 |
| Cys Pro Gly Tyr Trp Gly Ser Arg Cys His Glu Cys Pro Gly Gly Ala | 115 | 120 | 125 |
| Glu Thr Pro Cys Asn Gly His Gly Thr Cys Leu Asp Gly Met Asp Arg | 130 | 135 | 140 |
| Asn Gly Thr Cys Val Cys Gln Glu Asn Phe Arg Gly Ser Ala Cys Gln | 145 | 150 | 155 |
| Glu Cys Gln Asp Pro Asn Arg Phe Gly Pro Asp Cys Gln Ser Val Cys | 165 | 170 | 175 |
| Ser Cys Val His Gly Val Cys Asn His Gly Pro Arg Gly Asp Gly Ser | 180 | 185 | 190 |
| Cys Leu Cys Phe Ala Gly Tyr Thr Gly Pro His Cys Asp Gln Glu Leu | 195 | 200 | 205 |
| Pro Val Cys Gln Glu Leu Arg Cys Pro Gln Asn Thr Gln Cys Ser Ala | 210 | 215 | 220 |
| Glu Ala Pro Ser Cys Arg Cys Leu Pro Gly Tyr Thr Gln Gln Gly Ser | 225 | 230 | 235 |
| Glu Cys Arg Ala Pro Asn Pro Cys Trp Pro Ser Pro Cys Ser Leu Leu | 245 | 250 | 255 |
| Ala Gln Cys Ser Val Ser Pro Lys Gly Gln Ala Gln Cys His Cys Pro | 260 | 265 | 270 |
| Glu Asn Tyr His Gly Asp Gly Met Val Cys Leu Pro Lys Asp Pro Cys | 275 | 280 | 285 |
| Thr Asp Asn Leu Gly Gly Cys Pro Ser Asn Ser Thr Leu Cys Val Tyr | 290 | 295 | 300 |
| Gln Lys Pro Gly Gln Ala Phe Cys Thr Cys Arg Pro Gly Leu Val Ser | 305 | 310 | 315 |
|   |     |     | 320 |

Ile Asn Ser Asn Ala Ser Ala Gly Cys Phe Ala Phe Cys Ser Pro Phe  
                                   325                                  330                                  335

Ser Cys Asp Arg Ser Ala Thr Cys Gln Val Thr Ala Asp Gly Lys Thr  
                                   340                                  345                                  350

Ser Cys Val Cys Arg Glu Ala Arg Trp Gly Met Gly Val Pro Ala Thr  
                                   355                                  360                                  365

Asp Thr Cys Ser Thr Arg Cys Arg Arg Pro Arg Arg Gln Ala Gly Cys  
                                   370                                  375                                  380

Ser Cys Ser  
 385

<210> 90  
 <211> 432  
 <212> PRT  
 <213> Homo sapiens

<400> 90  
 Met Asp Val Asp Thr Leu Leu Gly Glu Asp Val Gln Leu His Thr Val  
   1                                  5                                  10                                  15

Gly Gly Thr Arg Ala Gly Val Gln Gly Leu Ala Val His Thr Gly Ala  
                                   20                                  25                                  30

Arg His Asn Leu Val Leu Leu Leu Ala Ala Val Leu Gly Gln Asp Gly  
                                   35                                  40                                  45

Gln Asp Gly Arg Gly Gln Gln Asp Ala Val Gln His Val Asp His Thr  
                                   50                                  55                                  60

Ile Gly Gly His His Val Tyr Pro Leu Gln Arg Asp Pro Leu Gly Ser  
   65                                  70                                  75                                  80

Gln Gln Asp Ala Pro Leu Leu Arg Asn Val His Ser Gln Asp Leu Val  
                                   85                                  90                                  95

Arg His Gly Glu Asp Pro Thr Leu Gly Asp Glu Leu Leu Asn Gly Gln  
                                   100                                  105                                  110

Leu Ala Val Val Val Asp Val Val Pro His Gln Leu Leu Gln Phe Arg  
                                   115                                  120                                  125

Glu Thr Arg Cys Glu Glu Val Asp Gln Ala Ala Val Thr Gln Ala Val  
                                   130                                  135                                  140

His Ser Leu Ile Ala Trp Gly Lys Asp Cys Glu Gly Pro Arg Ser Val  
   145                                  150                                  155                                  160

Gln Asp Gly Gly Gln Pro Thr Val Leu Gln Asp Gly Phe Lys Ala Ala  
                                   165                                  170                                  175

Glu Gly Leu Gly Arg Gly Glu Asp Leu Ser Asp Ser Ser Leu Gly Ile  
                                   180                                  185                                  190

Pro Arg Gly Pro Arg Gly Gly Leu Pro Pro Gln Ala Ser Asp His Val

| 195  | 200 | 205 |
|--|-----|-----|
| Glu Asp Ala Ile Ser Cys Tyr Val Val Gly Leu Val Asp Val Glu Arg<br>210 215 220     |     |     |
| Leu Leu Gly Leu Val Phe Val Leu Val Gly Val Phe Arg Glu Leu Val<br>225 230 235 240 |     |     |
| Lys Gly Asp Gly Asp Leu Leu Pro Gly Gln Arg Pro Pro Pro Ser Cys<br>245 250 255     |     |     |
| Leu Leu Gly Pro Cys Val Leu Gln Asp Val Leu Pro Cys Asp Asp Val<br>260 265 270     |     |     |
| Leu Ser Thr Glu Leu Leu Gly Lys Gly Cys Ile His Gly Pro Gly Gly<br>275 280 285     |     |     |
| Glu Gly Gly Asp Gly Trp His Gln His Gly Glu Arg Ala Arg Cys Gly<br>290 295 300     |     |     |
| Lys Asp Phe Pro Ala Ala Leu Val His His Gly His Gly Asp Pro Gln<br>305 310 315 320 |     |     |
| Leu Gln Glu His Pro Ala Cys Leu Arg Gly Leu Leu His Leu Val Glu<br>325 330 335     |     |     |
| Gln Val Ser Val Ala Gly Thr Pro Ile Pro His Leu Ala Ser Leu His<br>340 345 350     |     |     |
| Thr Gln Leu Val Phe Pro Ser Ala Val Thr Trp Gln Val Ala Asp Arg<br>355 360 365     |     |     |
| Ser Gln Glu Lys Gly Glu Gln Lys Ala Lys Gln Pro Ala Glu Ala Leu<br>370 375 380     |     |     |
| Leu Leu Met Leu Thr Arg Pro Gly Arg Gln Val Gln Lys Ala Trp Pro<br>385 390 395 400 |     |     |
| Gly Phe Trp Tyr Thr His Lys Val Glu Leu Leu Gly Gln Pro Pro Arg<br>405 410 415     |     |     |
| Leu Ser Val His Gly Ser Leu Gly Arg His Thr Ile Pro Ser Pro Trp<br>420 425 430     |     |     |

<210> 91  
 <211> 62  
 <212> PRT  
 <213> Homo sapiens

<220>  
 <221> SITE  
 <222> (51)  
 <223> Xaa equals any of the naturally occurring L-amino acids  
 <400> 91



Met Trp Ser Leu Val Ser Val Ser Val Leu Val Leu Thr Cys Ala Val  
 1 5 10 15

Asp Val Ala Glu Gly Leu Gly Trp Gly Glu Val Ser Thr Gly Gly Ile  
 20 25 30

Glu Leu Pro Arg His Met Val Leu Val Val Leu Val Glu Arg Glu Ser  
 35 40 45

Gln Arg Xaa Arg Thr Cys Ser Val Lys Thr Phe Ser Ser Arg  
 50 55 60

<210> 92  
 <211> 123  
 <212> PRT  
 <213> Homo sapiens

<400> 92  
 Met Ile Leu Gly Gly Ile Val Val Val Leu Val Phe Thr Gly Phe Val  
 1 5 10 15

Trp Ala Ala His Asn Lys Asp Val Leu Arg Arg Met Lys Lys Arg Tyr  
 20 25 30

Pro Thr Thr Phe Val Met Val Val Met Leu Ala Ser Tyr Phe Leu Ile  
 35 40 45

Ser Met Phe Gly Gly Val Met Val Phe Val Phe Gly Ile Thr Phe Pro  
 50 55 60

Leu Leu Leu Met Phe Ile His Ala Ser Leu Arg Leu Arg Asn Leu Lys  
 65 70 75 80

Asn Lys Leu Glu Asn Lys Met Glu Gly Ile Gly Leu Lys Arg Thr Pro  
 85 90 95

Met Gly Ile Val Leu Asp Ala Leu Glu Gln Gln Glu Glu Gly Ile Asn  
 100 105 110

Arg Leu Thr Asp Tyr Ile Ser Lys Val Lys Glu  
 115 120

<210> 93  
 <211> 72  
 <212> PRT  
 <213> Homo sapiens

<400> 93  
 Met Pro Leu Thr Leu Leu Ile Leu Ser Cys Leu Ala Asp Trp Thr Met  
 1 5 10 15

Ala Glu Ala Glu Gly Asn Ala Ser Cys Thr Val Ser Leu Gly Gly Ala  
 20 25 30

Asn Met Ala Glu Thr His Lys Ala Met Ile Leu Gln Leu Asn Pro Ser  
 35 40 45

Glu Asn Cys Thr Trp Thr Ile Glu Arg Pro Glu Asn Lys Ser Ile Arg  
 50 55 60

Ile Ile Phe Ser Tyr Val Pro Ala  
 65 70

<210> 94

<211> 254

<212> PRT

<213> Homo sapiens

<400> 94

Gln Leu Asp Pro Asp Gly Ser Cys Glu Ser Glu Asn Ile Lys Val Phe  
 1 5 10 15

Asp Gly Thr Ser Ser Asn Gly Pro Leu Leu Gly Gln Val Cys Ser Lys  
 20 25 30

Asn Asp Tyr Val Pro Val Phe Glu Ser Ser Ser Ser Thr Leu Thr Phe  
 35 40 45

Gln Ile Val Thr Asp Ser Ala Arg Ile Gln Arg Thr Val Phe Val Phe  
 50 55 60

Tyr Tyr Phe Phe Ser Pro Asn Ile Ser Ile Pro Asn Cys Gly Gly Tyr  
 65 70 75 80

Leu Asp Thr Leu Glu Gly Ser Phe Thr Ser Pro Asn Tyr Pro Lys Pro  
 85 90 95

His Pro Glu Leu Ala Tyr Cys Val Trp His Ile Gln Val Glu Lys Asp  
 100 105 110

Tyr Lys Ile Lys Leu Asn Phe Lys Glu Ile Phe Leu Glu Ile Asp Lys  
 115 120 125

Gln Cys Lys Phe Asp Phe Leu Ala Ile Tyr Asp Gly Pro Ser Thr Asn  
 130 135 140

Ser Gly Leu Ile Gly Gln Val Cys Gly Arg Val Thr Pro Thr Phe Glu  
 145 150 155 160

Ser Ser Ser Asn Ser Leu Thr Val Val Leu Ser Thr Asp Tyr Ala Asn  
 165 170 175

Ser Tyr Arg Gly Phe Ser Ala Ser Tyr Thr Ser Ile Tyr Ala Glu Asn  
 180 185 190

Ile Asn Thr Thr Ser Leu Thr Cys Ser Ser Asp Arg Met Arg Val Ile  
 195 200 205

Ile Ser Lys Ser Tyr Leu Glu Ala Phe Asn Ser Asn Gly Asn Asn Leu  
 210 215 220

Gln Leu Lys Asp Pro Thr Trp Gln Thr Lys Ile Ile Lys Trp Trp Gly  
 225 230 235 240

Asn Phe Leu Val Leu Leu Met Asp Val Val His Ser Glu Arg

245

250

<210> 95  
 <211> 51  
 <212> PRT  
 <213> Homo sapiens

<400> 95  
 Glu Ala Glu Gly Asn Ala Ser Cys Thr Val Ser Leu Gly Gly Ala Asn  
 1 5 10 15  
 Met Ala Glu Thr His Lys Ala Met Ile Leu Gln Leu Asn Pro Ser Glu  
 20 25 30  
 Asn Cys Thr Trp Thr Ile Glu Arg Pro Glu Asn Lys Ser Ile Arg Ile  
 35 40 45  
 Ile Phe Ser  
 50

<210> 96  
 <211> 324  
 <212> PRT  
 <213> Homo sapiens

<400> 96  
 Met Pro Leu Thr Leu Leu Ile Leu Ser Cys Leu Ala Asp Trp Thr Met  
 1 5 10 15  
 Ala Glu Ala Glu Gly Asn Ala Ser Cys Thr Val Ser Leu Gly Gly Ala  
 20 25 30  
 Asn Met Ala Glu Thr His Lys Ala Met Ile Leu Gln Leu Asn Pro Ser  
 35 40 45  
 Glu Asn Cys Thr Trp Thr Ile Glu Arg Pro Glu Asn Lys Ser Ile Arg  
 50 55 60  
 Ile Ile Phe Ser Tyr Val Gln Leu Asp Pro Asp Gly Ser Cys Glu Ser  
 65 70 75 80  
 Glu Asn Ile Lys Val Phe Asp Gly Thr Ser Ser Asn Gly Pro Leu Leu  
 85 90 95  
 Gly Gln Val Cys Ser Lys Asn Asp Tyr Val Pro Val Phe Glu Ser Ser  
 100 105 110  
 Ser Ser Thr Leu Thr Phe Gln Ile Val Thr Asp Ser Ala Arg Ile Gln  
 115 120 125  
 Arg Thr Val Phe Val Phe Tyr Tyr Phe Phe Ser Pro Asn Ile Ser Ile  
 130 135 140  
 Pro Asn Cys Gly Gly Tyr Leu Asp Thr Leu Glu Gly Ser Phe Thr Ser  
 145 150 155 160  
 Pro Asn Tyr Pro Lys Pro His Pro Glu Leu Ala Tyr Cys Val Trp His

| 165 |     |     |     |     |     |     |     |     |     | 170 |     |     |     |     | 175 |  |  |  |  |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|--|--|--|
| Ile | Gln | Val | Glu | Lys | Asp | Tyr | Lys | Ile | Lys | Leu | Asn | Phe | Lys | Glu | Ile |  |  |  |  |
|     |     |     | 180 |     |     |     |     | 185 |     |     |     |     | 190 |     |     |  |  |  |  |
| Phe | Leu | Glu | Ile | Asp | Lys | Gln | Cys | Lys | Phe | Asp | Phe | Leu | Ala | Ile | Tyr |  |  |  |  |
|     |     | 195 |     |     |     |     | 200 |     |     |     |     | 205 |     |     |     |  |  |  |  |
| Asp | Gly | Pro | Ser | Thr | Asn | Ser | Gly | Leu | Ile | Gly | Gln | Val | Cys | Gly | Arg |  |  |  |  |
|     | 210 |     |     |     |     | 215 |     |     |     |     | 220 |     |     |     |     |  |  |  |  |
| Val | Thr | Pro | Thr | Phe | Glu | Ser | Ser | Ser | Asn | Ser | Leu | Thr | Val | Val | Leu |  |  |  |  |
|     | 225 |     |     |     | 230 |     |     |     |     | 235 |     |     |     |     | 240 |  |  |  |  |
| Ser | Thr | Asp | Tyr | Ala | Asn | Ser | Tyr | Arg | Gly | Phe | Ser | Ala | Ser | Tyr | Thr |  |  |  |  |
|     |     |     |     | 245 |     |     |     |     | 250 |     |     |     |     | 255 |     |  |  |  |  |
| Ser | Ile | Tyr | Ala | Glu | Asn | Ile | Asn | Thr | Thr | Ser | Leu | Thr | Cys | Ser | Ser |  |  |  |  |
|     |     | 260 |     |     |     |     |     | 265 |     |     |     |     | 270 |     |     |  |  |  |  |
| Asp | Arg | Met | Arg | Val | Ile | Ile | Ser | Lys | Ser | Tyr | Leu | Glu | Ala | Phe | Asn |  |  |  |  |
|     | 275 |     |     |     |     |     | 280 |     |     |     |     | 285 |     |     |     |  |  |  |  |
| Ser | Asn | Gly | Asn | Asn | Leu | Gln | Leu | Lys | Asp | Pro | Thr | Trp | Gln | Thr | Lys |  |  |  |  |
|     | 290 |     |     |     |     | 295 |     |     |     |     | 300 |     |     |     |     |  |  |  |  |
| Ile | Ile | Lys | Trp | Trp | Gly | Asn | Phe | Leu | Val | Leu | Leu | Met | Asp | Val | Val |  |  |  |  |
|     | 305 |     |     |     | 310 |     |     |     |     | 315 |     |     |     |     | 320 |  |  |  |  |

His Ser Glu Arg

<210> 97  
 <211> 29  
 <212> PRT  
 <213> Homo sapiens

<400> 97  
 Cys Gly Gly Tyr Leu Asp Thr Leu Glu Gly Ser Phe Thr Ser Pro Asn  
 1 5 10 15  
 Tyr Pro Lys Pro His Pro Glu Leu Ala Tyr Cys Val Trp  
 20 25

<210> 98  
 <211> 245  
 <212> PRT  
 <213> Homo sapiens

<400> 98  
 Met Ala Glu Leu Pro Gly Pro Phe Leu Cys Gly Ala Leu Leu Gly Phe  
 1 5 10 15  
 Leu Cys Leu Ser Gly Leu Ala Val Glu Val Lys Val Pro Thr Glu Pro  
 20 25 30  
 Leu Ser Thr Pro Leu Gly Lys Thr Ala Glu Leu Thr Cys Thr Tyr Ser

|   |     |             |
|---|-----|-------------|
| 35  | 40  | 45          |
| Thr Ser Val Gly Asp Ser Phe Ala Leu Glu Trp Ser Phe Val Gln Pro |     |             |
| 50  | 55  | 60          |
| Gly Lys Pro Ile Ser Glu Ser His Pro Ile Leu Tyr Phe Thr Asn Gly |     |             |
| 65  | 70  | 75 80       |
| His Leu Tyr Pro Thr Gly Ser Lys Ser Lys Arg Val Ser Leu Leu Gln |     |             |
|   | 85  | 90 95       |
| Asn Pro Pro Thr Val Gly Val Ala Thr Leu Lys Leu Thr Asp Val His |     |             |
|   | 100 | 105 110     |
| Pro Ser Asp Thr Gly Thr Tyr Leu Cys Gln Val Asn Asn Pro Pro Asp |     |             |
|   | 115 | 120 125     |
| Phe Tyr Thr Asn Gly Leu Gly Leu Ile Asn Leu Thr Val Leu Val Pro |     |             |
|   | 130 | 135 140     |
| Pro Ser Asn Pro Leu Cys Ser Gln Ser Gly Gln Thr Ser Val Gly Gly |     |             |
|   | 145 | 150 155 160 |
| Ser Thr Ala Leu Arg Cys Ser Ser Ser Glu Gly Ala Pro Lys Pro Val |     |             |
|   | 165 | 170 175     |
| Tyr Asn Trp Val Arg Leu Gly Thr Phe Pro Thr Pro Ser Pro Gly Ser |     |             |
|   | 180 | 185 190     |
| Met Val Gln Asp Glu Val Ser Gly Gln Leu Ile Leu Thr Asn Leu Ser |     |             |
|   | 195 | 200 205     |
| Leu Thr Ser Ser Gly Thr Tyr Arg Cys Val Ala Thr Asn Gln Met Gly |     |             |
|   | 210 | 215 220     |
| Ser Ala Ser Cys Glu Leu Thr Leu Ser Val Thr Glu Pro Ser Gln Gly |     |             |
|   | 225 | 230 235 240 |
| Arg Val Ala Glu Leu   |     |             |
|   | 245 |             |

<210> 99  
 <211> 10  
 <212> PRT  
 <213> Homo sapiens

<400> 99  
 Leu Phe Leu Leu Gly Tyr Ser Asp Gly Ala  
 1 5 10

<210> 100  
 <211> 132  
 <212> PRT  
 <213> Homo sapiens

<400> 100  
 Leu Asn Asn Ser Pro Leu Tyr Glu Asn Thr Thr Phe Tyr Leu Ser Thr

|   |     |     |     |
|---|-----|-----|-----|
| 1   | 5   | 10  | 15  |
| His Gln Val Met Ala Ile Trp Val Val Phe Ile Tyr Trp Leu Leu Leu | 20  | 25  | 30  |
| Val Phe Cys Glu His Ser Cys Ile Ser Phe Arg Val Asp Val Cys Ile | 35  | 40  | 45  |
| His Phe Ser Cys Asn Lys Phe Tyr Leu Gly Val Glu Leu Leu Asp His | 50  | 55  | 60  |
| Met Ala Ala Leu Leu Thr Leu Trp Gly Thr Ala Arg Leu Leu Phe Lys | 65  | 70  | 75  |
| Val Ser Ala Pro Cys Ser Leu Ser Ser Ala Val Tyr Asp Gly Ser Val | 85  | 90  | 95  |
| Ser Ser Gln Pro His Gln Tyr Leu Phe Ser Val Cys Arg Trp Gly Leu | 100 | 105 | 110 |
| Leu Glu His His His Ile His Ser Phe Thr Tyr Tyr Leu Trp Leu Leu | 115 | 120 | 125 |
| Leu Gln Tyr Ser   | 130 |     |     |

<210> 101  
 <211> 38  
 <212> PRT  
 <213> Homo sapiens

|   |
|---|
| <400> 101   |
| Leu Leu Asn Lys Thr Thr Phe Tyr Leu Pro Met Ala Arg Gln Val Phe |
| 1 5 10 15   |
| Phe Gln Leu Ser Pro Ile His Pro Val Pro Ser Asn Leu Ser Met Gly |
| 20 25 30  |
| Trp Asn Leu Thr Leu Gly   |
| 35  |

<210> 102  
 <211> 88  
 <212> PRT  
 <213> Homo sapiens

|   |
|---|
| <400> 102   |
| Leu Leu Asn Lys Thr Thr Phe Tyr Leu Pro Met Ala Arg Gln Val Phe |
| 1 5 10 15   |
| Phe Gln Leu Ser Pro Ile His Pro Val Pro Ser Asn Leu Ser Met Gly |
| 20 25 30  |
| Trp Asn Leu Thr Leu Gly Met Thr Phe Gly Ile Val Val Asp Leu Thr |
| 35 40 45  |
| Pro Val Phe Val Leu Val Leu Phe Leu Pro Ala Phe Leu Phe Leu Ser |

[illegible]

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<210> 103
<211> 47
<212> PRT
<213> Homo sapiens
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<400> 103
Asn Ser Ala Arg Ala Ala Ala Glu Gly Arg Gly Ser Leu Arg Thr Pro
 1             5             10             15
Gly Phe Arg Gly Gly Gly Val Leu Tyr Trp Asp Ala Gly Ala Ala Gly
          20             25             30
Thr Gly Ser Asn His Ala Leu Gly Ala Asn Val Glu Leu Trp Ile
      35             40             45

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<210> 104
<211> 262
<212> PRT
<213> Homo sapiens
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|           |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |    |
|-----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|
| <400> 104 |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |    |
| Asn       | Ser | Ala | Arg | Ala | Ala | Ala | Glu | Gly | Arg | Gly | Ser | Leu | Arg | Thr | Pro |    |
| 1         |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |    |
| Gly       | Phe | Arg | Gly | Gly | Gly | Val | Leu | Tyr | Trp | Asp | Ala | Gly | Ala | Ala | Gly |    |
|           |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |    |
| Thr       | Gly | Ser | Asn | His | Ala | Leu | Gly | Ala | Asn | Val | Glu | Leu | Trp | Ile | Met |    |
|           |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |    |
| Leu       | Leu | Gln | Val | Val | Arg | Glu | Gly | Lys | Phe | Ser | Gly | Phe | Leu | Thr | Ser |    |
|           | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |    |
| Cys       | Ser | Leu | Leu | Leu | Pro | Arg | Ala | Ala | Gln | Ile | Leu | Ala | Ala | Glu | Ala |    |
| 65        |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     |     | 80 |
| Gly       | Leu | Pro | Ser | Ser | Arg | Ser | Phe | Met | Gly | Phe | Ala | Ala | Pro | Phe | Thr |    |
|           |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |    |
| Asn       | Lys | Arg | Lys | Ala | Tyr | Ser | Glu | Arg | Arg | Ile | Met | Gly | Tyr | Ser | Met |    |
|           |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |    |
| Gln       | Glu | Met | Tyr | Glu | Val | Val | Ser | Asn | Val | Gln | Glu | Tyr | Arg | Glu | Phe |    |
|           |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |    |
| Val       | Pro | Trp | Cys | Lys | Lys | Ser | Leu | Val | Val | Ser | Ser | Arg | Lys | Gly | His |    |
|           | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |    |
| Leu       | Lys | Ala | Gln | Leu | Glu | Val | Gly | Phe | Pro | Pro | Val | Met | Glu | Arg | Tyr |    |

145                      150                      155                      160  
 Thr Ser Ala Val Ser Met Val Lys Pro His Met Val Lys Ala Val Cys  
                                  165                      170                      175  
 Thr Asp Gly Lys Leu Phe Asn His Leu Glu Thr Ile Trp Arg Phe Ser  
                                  180                      185                      190  
 Pro Gly Ile Pro Ala Tyr Pro Arg Thr Cys Thr Val Asp Phe Ser Ile  
                                  195                      200                      205  
 Ser Phe Glu Phe Arg Ser Leu Leu His Ser Gln Leu Ala Thr Met Phe  
                                  210                      215                      220  
 Phe Asp Glu Val Val Lys Gln Asn Val Ala Ala Phe Glu Arg Arg Ala  
 225                                   230                                   235                                   240  
 Ala Thr Lys Phe Gly Pro Glu Thr Ala Ile Pro Arg Glu Leu Met Phe  
                                  245                                   250                                   255  
 His Glu Val His Gln Thr  
                                  260

<210> 105  
 <211> 34  
 <212> PRT  
 <213> Homo sapiens

<400> 105  
 Arg Trp Ile Phe Phe Gln Lys Cys Arg Pro Ile Leu Ile Lys Phe Val  
   1                                 5                                 10                                 15  
 Ile Asn His Trp Gly Gly Gln Ala Pro Trp Ile Arg Ser Ala Phe Gly  
                                  20                                 25                                 30

Asp Thr

<210> 106  
 <211> 345  
 <212> PRT  
 <213> Homo sapiens

<220>  
 <221> SITE  
 <222> (290)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<400> 106  
 Arg Trp Ile Phe Phe Gln Lys Cys Arg Pro Ile Leu Ile Lys Phe Val  
   1                                 5                                 10                                 15  
 Ile Asn His Trp Gly Gly Gln Ala Pro Trp Ile Arg Ser Ala Phe Gly  
                                  20                                 25                                 30  
 Asp Thr Met Gly Val Met Ala Met Leu Met Leu Pro Leu Leu Leu Leu  
                                  35                                 40                                 45



Gly Ile Ser Gly Leu Leu Phe Ile Tyr Gln Glu Val Ser Arg Leu Trp  
 50 55 60  
 Ser Lys Ser Ala Val Gln Asn Lys Val Val Val Ile Thr Asp Ala Ile  
 65 70 75 80  
 Ser Gly Leu Gly Lys Glu Cys Ala Arg Val Phe His Thr Gly Gly Ala  
 85 90 95  
 Arg Leu Val Leu Cys Gly Lys Asn Trp Glu Arg Leu Glu Asn Leu Tyr  
 100 105 110  
 Asp Ala Leu Ile Ser Val Ala Asp Pro Ser Lys Thr Phe Thr Pro Lys  
 115 120 125  
 Leu Val Leu Leu Asp Leu Ser Asp Ile Ser Cys Val Pro Asp Val Ala  
 130 135 140  
 Lys Glu Val Leu Asp Cys Tyr Gly Cys Val Asp Ile Leu Ile Asn Asn  
 145 150 155 160  
 Ala Ser Val Lys Val Lys Gly Pro Ala His Lys Ile Ser Leu Glu Leu  
 165 170 175  
 Asp Lys Lys Ile Met Asp Ala Asn Tyr Phe Gly Pro Ile Thr Leu Thr  
 180 185 190  
 Lys Ala Leu Leu Pro Asn Met Ile Ser Arg Arg Thr Gly Gln Ile Val  
 195 200 205  
 Leu Val Asn Asn Ile Gln Gly Lys Phe Gly Ile Pro Phe Arg Thr Thr  
 210 215 220  
 Tyr Ala Ala Ser Lys His Ala Ala Leu Gly Phe Phe Asp Cys Leu Arg  
 225 230 235 240  
 Ala Glu Val Glu Glu Tyr Asp Val Val Ile Ser Thr Val Ser Pro Thr  
 245 250 255  
 Phe Ile Arg Ser Tyr His Val Tyr Pro Glu Gln Gly Asn Trp Glu Ala  
 260 265 270  
 Ser Ile Trp Lys Phe Phe Phe Arg Lys Leu Thr Tyr Gly Val His Pro  
 275 280 285  
 Val Xaa Val Ala Glu Glu Val Met Arg Thr Val Arg Arg Lys Lys Gln  
 290 295 300  
 Glu Val Phe Met Ala Asn Pro Ile Pro Lys Ala Ala Val Tyr Val Arg  
 305 310 315 320  
 Thr Phe Phe Pro Glu Phe Phe Phe Ala Val Val Ala Cys Gly Val Lys  
 325 330 335  
 Glu Lys Leu Asn Val Pro Glu Glu Gly  
 340 345

<210> 107  
 <211> 29  
 <212> PRT  
 <213> Homo sapiens

<400> 107  
 Asn Ile Gln Gly Lys Phe Gly Ile Pro Phe Arg Thr Thr Tyr Ala Ala  
           1                  5                  10                  15  
 Ser Lys His Ala Ala Leu Gly Phe Phe Asp Cys Leu Arg  
                   20                  25

<210> 108  
 <211> 480  
 <212> PRT  
 <213> Homo sapiens

<400> 108  
 Asp Pro Arg Val Arg Ala Cys Leu Ser Thr Gln Arg Asp Ile Ser Ser  
           1                  5                  10                  15  
 Arg Ala Ile Thr Gln Pro Gln Arg Arg Asn Pro Asn Leu Thr Phe Cys  
                   20                  25                  30  
 Cys Cys Phe Ser Thr Ile Leu Trp Val Leu Asp Trp Leu Ser Gln Ala  
           35                  40                  45  
 Cys Cys Pro Ala Ala Ser Leu Pro Val Ser Phe Ser Gln Ala Val Cys  
           50                  55                  60  
 Trp Arg Ser Met Arg Arg Gly Cys Ala Val Leu Gly Ala Leu Gly Leu  
           65                  70                  75                  80  
 Leu Ala Gly Ala Gly Val Gly Ser Trp Leu Leu Val Leu Tyr Leu Cys  
                   85                  90                  95  
 Pro Ala Ala Ser Gln Pro Ile Ser Gly Thr Leu Gln Asp Glu Glu Ile  
                   100                  105                  110  
 Thr Leu Ser Cys Ser Glu Ala Ser Ala Glu Glu Ala Leu Leu Pro Ala  
           115                  120                  125  
 Leu Pro Lys Thr Val Ser Phe Arg Ile Asn Ser Glu Asp Phe Leu Leu  
           130                  135                  140  
 Glu Ala Gln Val Arg Asp Gln Pro Arg Trp Leu Leu Val Cys His Glu  
           145                  150                  155                  160  
 Gly Trp Ser Pro Ala Leu Gly Leu Gln Ile Cys Trp Ser Leu Gly His  
                   165                  170                  175  
 Leu Arg Leu Thr His His Lys Gly Val Asn Leu Thr Asp Ile Lys Leu  
                   180                  185                  190  
 Asn Ser Ser Gln Glu Phe Ala Gln Leu Ser Pro Arg Leu Gly Gly Phe  
           195                  200                  205  
 Leu Glu Glu Ala Trp Gln Pro Arg Asn Asn Cys Thr Ser Gly Gln Val

| 210   | 215 | 220         |
|---|-----|-------------|
| Val Ser Leu Arg Cys Ser Glu Cys Gly Ala Arg Pro Leu Ala Ser Arg |     |             |
| 225   | 230 | 235 240     |
| Ile Val Gly Gly Gln Ser Val Ala Pro Gly Arg Trp Pro Trp Gln Ala |     |             |
|   | 245 | 250 255     |
| Ser Val Ala Leu Gly Phe Arg His Thr Cys Gly Gly Ser Val Leu Ala |     |             |
|   | 260 | 265 270     |
| Pro Arg Trp Val Val Thr Ala Ala His Cys Met His Ser Phe Arg Leu |     |             |
|   | 275 | 280 285     |
| Ala Arg Leu Ser Ser Trp Arg Val His Ala Gly Leu Val Ser His Ser |     |             |
|   | 290 | 295 300     |
| Ala Val Arg Pro His Gln Gly Ala Leu Val Glu Arg Ile Ile Pro His |     |             |
|   | 305 | 310 315 320 |
| Pro Leu Tyr Ser Ala Gln Asn His Asp Tyr Asp Val Ala Leu Leu Arg |     |             |
|   | 325 | 330 335     |
| Leu Gln Thr Ala Leu Asn Phe Ser Asp Thr Val Gly Ala Val Cys Leu |     |             |
|   | 340 | 345 350     |
| Pro Ala Lys Glu Gln His Phe Pro Lys Gly Ser Arg Cys Trp Val Ser |     |             |
|   | 355 | 360 365     |
| Gly Trp Gly His Thr His Pro Ser His Thr Tyr Ser Ser Asp Met Leu |     |             |
|   | 370 | 375 380     |
| Gln Asp Thr Val Val Pro Leu Phe Ser Thr Gln Leu Cys Asn Ser Ser |     |             |
|   | 385 | 390 395 400 |
| Cys Val Tyr Ser Gly Ala Leu Thr Pro Arg Met Leu Cys Ala Gly Tyr |     |             |
|   | 405 | 410 415     |
| Leu Asp Gly Arg Ala Asp Ala Cys Gln Gly Asp Ser Gly Gly Pro Leu |     |             |
|   | 420 | 425 430     |
| Val Cys Pro Asp Gly Asp Thr Trp Arg Leu Val Gly Val Val Ser Trp |     |             |
|   | 435 | 440 445     |
| Gly Arg Gly Cys Ala Glu Pro Asn His Pro Gly Val Tyr Ala Lys Val |     |             |
|   | 450 | 455 460     |
| Ala Glu Phe Leu Asp Trp Ile His Asp Thr Ala Gln Asp Ser Leu Leu |     |             |
|   | 465 | 470 475 480 |

<210> 109  
 <211> 67  
 <212> PRT  
 <213> Homo sapiens

&lt;400&gt; 109

Asp Pro Arg Val Arg Ala Cys Leu Ser Thr Gln Arg Asp Ile Ser Ser  
 1 5 10 15

Arg Ala Ile Thr Gln Pro Gln Arg Arg Asn Pro Asn Leu Thr Phe Cys  
 20 25 30

Cys Cys Phe Ser Thr Ile Leu Trp Val Leu Asp Trp Leu Ser Gln Ala  
 35 40 45

Cys Cys Pro Ala Ala Ser Leu Pro Val Ser Phe Ser Gln Ala Val Cys  
 50 55 60

Trp Arg Ser  
 65

&lt;210&gt; 110

&lt;211&gt; 30

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 110

Thr Cys Gly Gly Ser Val Leu Ala Pro Arg Trp Val Val Thr Ala Ala  
 1 5 10 15

His Cys Met His Ser Phe Arg Leu Ala Arg Leu Ser Ser Trp  
 20 25 30

&lt;210&gt; 111

&lt;211&gt; 30

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 111

Cys Ala Gly Tyr Leu Asp Gly Arg Ala Asp Ala Cys Gln Gly Asp Ser  
 1 5 10 15

Gly Gly Pro Leu Val Cys Pro Asp Gly Asp Thr Trp Arg Leu  
 20 25 30

&lt;210&gt; 112

&lt;211&gt; 72

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 112

Cys Arg Asn Ser Ala Arg Ala Phe Ser Gly Leu Ser Met Val Ala Tyr  
 1 5 10 15

Ser Val Gln Val Leu Ala Val Phe Ile Ser Cys Ala Ile Leu Thr Leu  
 20 25 30

Ala Met Lys Ile Ala Trp Ile Phe Gly Leu Asn Ser Val Gln Asn Ile  
 35 40 45

Thr Ala Asn Leu Ser Val Asp Gly Ser Thr Ser Gly Asn Pro Ile Gln

50                                      55                                      60  
 Lys Trp Lys Val Ile Trp Ser Leu  
 65                                      70  
  
 <210> 113  
 <211> 12  
 <212> PRT  
 <213> Homo sapiens  
  
 <400> 113  
 Cys Arg Asn Ser Ala Arg Ala Phe Ser Gly Leu Ser  
 1                                      5                                      10  
  
 <210> 114  
 <211> 351  
 <212> PRT  
 <213> Homo sapiens  
  
 <400> 114  
 Met Ile Thr Asp Ala Leu Thr Ala Ile Ala Leu Tyr Phe Ala Ile Gln  
 1                                      5                                      10                                      15  
 Asp Phe Asn Lys Val Val Phe Lys Lys Gln Lys Leu Leu Leu Glu Leu  
 20                                      25                                      30  
 Asp Gln Tyr Ala Pro Asp Val Ala Glu Leu Ile Arg Thr Pro Met Glu  
 35                                      40                                      45  
 Met Arg Tyr Ile Pro Leu Lys Val Ala Leu Phe Tyr Leu Leu Asn Pro  
 50                                      55                                      60  
 Tyr Thr Ile Leu Ser Cys Val Ala Lys Ser Thr Cys Ala Ile Asn Asn  
 65                                      70                                      75                                      80  
 Thr Leu Ile Ala Phe Phe Ile Leu Thr Thr Ile Lys Gly Ser Ala Phe  
 85                                      90                                      95  
 Leu Ser Ala Ile Phe Leu Ala Leu Ala Thr Tyr Gln Ser Leu Tyr Pro  
 100                                      105                                      110  
 Leu Thr Leu Phe Val Pro Gly Leu Leu Tyr Leu Leu Gln Arg Gln Tyr  
 115                                      120                                      125  
 Ile Pro Val Lys Met Lys Ser Lys Ala Phe Trp Ile Phe Ser Trp Glu  
 130                                      135                                      140  
 Tyr Ala Met Met Tyr Val Gly Ser Leu Val Val Ile Ile Cys Leu Ser  
 145                                      150                                      155                                      160  
 Phe Phe Leu Leu Ser Ser Trp Asp Phe Ile Pro Ala Val Tyr Gly Phe  
 165                                      170                                      175  
 Ile Leu Ser Val Pro Asp Leu Thr Pro Asn Ile Gly Leu Phe Trp Tyr  
 180                                      185                                      190  
 Phe Phe Ala Glu Met Phe Glu His Phe Ser Leu Phe Phe Val Cys Val

| 195 |     |     |     |     | 200 |     |     |     |     | 205 |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Phe | Gln | Ile | Asn | Val | Phe | Phe | Tyr | Thr | Ile | Pro | Leu | Ala | Ile | Lys | Leu |
| 210 |     |     |     |     | 215 |     |     |     |     | 220 |     |     |     |     |     |
| Lys | Glu | His | Pro | Ile | Phe | Phe | Met | Phe | Ile | Gln | Ile | Ala | Val | Ile | Ala |
| 225 |     |     |     |     | 230 |     |     |     |     | 235 |     |     |     |     | 240 |
| Ile | Phe | Lys | Ser | Tyr | Pro | Thr | Val | Gly | Asp | Val | Ala | Leu | Tyr | Met | Ala |
|     |     |     |     | 245 |     |     |     |     | 250 |     |     |     |     | 255 |     |
| Phe | Phe | Pro | Val | Trp | Asn | His | Leu | Tyr | Arg | Phe | Leu | Arg | Asn | Ile | Phe |
|     |     |     | 260 |     |     |     |     | 265 |     |     |     |     | 270 |     |     |
| Val | Leu | Thr | Cys | Ile | Ile | Ile | Val | Cys | Ser | Leu | Leu | Phe | Pro | Val | Leu |
|     |     | 275 |     |     |     |     | 280 |     |     |     |     | 285 |     |     |     |
| Trp | His | Leu | Trp | Ile | Tyr | Pro | Gly | Asn | Ala | Asn | Ser | Asn | Phe | Phe | Tyr |
|     |     | 290 |     |     |     | 295 |     |     |     |     | 300 |     |     |     |     |
| Ala | Ile | Thr | Leu | Thr | Phe | Asn | Val | Gly | Gln | Ile | Leu | Leu | Ile | Ser | Asp |
| 305 |     |     |     |     | 310 |     |     |     |     | 315 |     |     |     |     | 320 |
| Tyr | Phe | Tyr | Ala | Phe | Leu | Arg | Arg | Glu | Tyr | Tyr | Leu | Thr | His | Gly | Leu |
|     |     |     | 325 |     |     |     |     |     | 330 |     |     |     |     | 335 |     |
| Tyr | Leu | Thr | Ala | Lys | Asp | Gly | Thr | Glu | Ala | Met | Leu | Val | Leu | Lys |     |
|     |     |     | 340 |     |     |     |     | 345 |     |     |     |     | 350 |     |     |

<210> 115  
 <211> 81  
 <212> PRT  
 <213> Homo sapiens

<400> 115  
 Pro Thr Arg Pro Arg Ala Pro Ala Pro Val Ile Met Ala Ala Pro Leu  
 1 5 10 15  
 Val Leu Val Leu Val Val Ala Val Thr Val Arg Ala Ala Leu Phe Arg  
 20 25 30  
 Ser Ser Leu Ala Glu Phe Ile Ser Glu Arg Val Glu Val Val Ser Pro  
 35 40 45  
 Leu Ser Ser Trp Lys Arg Val Val Glu Gly Leu Ser Leu Leu Gly Leu  
 50 55 60  
 Gly Ser Ile Ser Val Phe Trp Ser Ser Ile Ser Trp Lys Leu His Ser  
 65 70 75 80  
 Leu

<210> 116  
 <211> 11  
 <212> PRT  
 <213> Homo sapiens

&lt;400&gt; 116

Pro Thr Arg Pro Arg Ala Pro Ala Pro Val Ile  
 1 5 10

&lt;210&gt; 117

&lt;211&gt; 322

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 117

Ile Tyr Leu Phe His Phe Leu Ile Asp Tyr Ala Glu Leu Val Phe Met  
 1 5 10 15

Ile Thr Asp Ala Leu Thr Ala Ile Ala Leu Tyr Phe Ala Ile Gln Asp  
 20 25 30

Phe Asn Lys Val Val Phe Lys Lys Gln Lys Leu Leu Leu Glu Leu Asp  
 35 40 45

Gln Tyr Ala Pro Asp Val Ala Glu Leu Ile Arg Thr Pro Met Glu Met  
 50 55 60

Arg Tyr Ile Pro Leu Lys Val Ala Leu Phe Tyr Leu Leu Asn Pro Tyr  
 65 70 75 80

Thr Ile Leu Ser Cys Val Ala Lys Ser Thr Cys Ala Ile Asn Asn Thr  
 85 90 95

Leu Ile Ala Phe Phe Ile Leu Thr Thr Ile Lys Gly Ser Ala Phe Leu  
 100 105 110

Ser Ala Ile Phe Leu Ala Leu Ala Thr Tyr Gln Ser Leu Tyr Pro Leu  
 115 120 125

Thr Leu Phe Val Pro Gly Leu Leu Tyr Leu Leu Gln Arg Gln Tyr Ile  
 130 135 140

Pro Val Lys Met Lys Ser Lys Ala Phe Trp Ile Phe Ser Trp Glu Tyr  
 145 150 155 160

Ala Met Met Tyr Val Gly Ser Leu Val Val Ile Ile Cys Leu Ser Phe  
 165 170 175

Phe Leu Leu Ser Ser Trp Asp Phe Ile Pro Ala Val Tyr Gly Phe Ile  
 180 185 190

Leu Ser Val Pro Asp Leu Thr Pro Asn Ile Gly Leu Phe Trp Tyr Phe  
 195 200 205

Phe Ala Glu Met Phe Glu His Phe Ser Leu Phe Phe Val Cys Val Phe  
 210 215 220

Gln Ile Asn Val Phe Phe Tyr Thr Ile Pro Leu Ala Ile Lys Leu Lys  
 225 230 235 240

Glu His Pro Ile Phe Phe Met Phe Ile Gln Ile Ala Val Ile Ala Ile  
 245 250 255

Phe Lys Ser Tyr Pro Thr Val Gly Asp Val Ala Leu Tyr Met Ala Phe  
260 265 270

Phe Pro Val Trp Asn His Leu Tyr Arg Phe Leu Arg Asn Ile Phe Val  
275 280 285

Leu Thr Cys Ile Ile Ile Val Cys Ser Leu Leu Phe Pro Val Leu Trp  
290 295 300

His Leu Trp Ile Tyr Pro Gly Met Pro Thr Leu Ile Ser Phe Met Pro  
305 310 315 320

Ser His

<210> 118

<211> 15

<212> PRT

<213> Homo sapiens

<400> 118

Ile Tyr Leu Phe His Phe Leu Ile Asp Tyr Ala Glu Leu Val Phe  
1 5 10 15

<210> 119

<211> 307

<212> PRT

<213> Homo sapiens

<400> 119

Met Ile Thr Asp Ala Leu Thr Ala Ile Ala Leu Tyr Phe Ala Ile Gln  
1 5 10 15

Asp Phe Asn Lys Val Val Phe Lys Lys Gln Lys Leu Leu Leu Glu Leu  
20 25 30

Asp Gln Tyr Ala Pro Asp Val Ala Glu Leu Ile Arg Thr Pro Met Glu  
35 40 45

Met Arg Tyr Ile Pro Leu Lys Val Ala Leu Phe Tyr Leu Leu Asn Pro  
50 55 60

Tyr Thr Ile Leu Ser Cys Val Ala Lys Ser Thr Cys Ala Ile Asn Asn  
65 70 75 80

Thr Leu Ile Ala Phe Phe Ile Leu Thr Thr Ile Lys Gly Ser Ala Phe  
85 90 95

Leu Ser Ala Ile Phe Leu Ala Leu Ala Thr Tyr Gln Ser Leu Tyr Pro  
100 105 110

Leu Thr Leu Phe Val Pro Gly Leu Leu Tyr Leu Leu Gln Arg Gln Tyr  
115 120 125

Ile Pro Val Lys Met Lys Ser Lys Ala Phe Trp Ile Phe Ser Trp Glu  
130 135 140



Tyr Ala Met Met Tyr Val Gly Ser Leu Val Val Ile Ile Cys Leu Ser  
 145 150 155 160  
 Phe Phe Leu Leu Ser Ser Trp Asp Phe Ile Pro Ala Val Tyr Gly Phe  
 165 170 175  
 Ile Leu Ser Val Pro Asp Leu Thr Pro Asn Ile Gly Leu Phe Trp Tyr  
 180 185 190  
 Phe Phe Ala Glu Met Phe Glu His Phe Ser Leu Phe Phe Val Cys Val  
 195 200 205  
 Phe Gln Ile Asn Val Phe Phe Tyr Thr Ile Pro Leu Ala Ile Lys Leu  
 210 215 220  
 Lys Glu His Pro Ile Phe Phe Met Phe Ile Gln Ile Ala Val Ile Ala  
 225 230 235 240  
 Ile Phe Lys Ser Tyr Pro Thr Val Gly Asp Val Ala Leu Tyr Met Ala  
 245 250 255  
 Phe Phe Pro Val Trp Asn His Leu Tyr Arg Phe Leu Arg Asn Ile Phe  
 260 265 270  
 Val Leu Thr Cys Ile Ile Ile Val Cys Ser Leu Leu Phe Pro Val Leu  
 275 280 285  
 Trp His Leu Trp Ile Tyr Pro Gly Met Pro Thr Leu Ile Ser Phe Met  
 290 295 300  
 Pro Ser His  
 305

<210> 120  
 <211> 35  
 <212> PRT  
 <213> Homo sapiens

<400> 120  
 Met Ile Thr Asp Ala Leu Thr Ala Ile Ala Leu Tyr Phe Ala Ile Gln  
 1 5 10 15  
 Asp Phe Asn Lys Val Val Phe Lys Lys Gln Lys Leu Leu Leu Glu Leu  
 20 25 30  
 Asp Gln Tyr  
 35

<210> 121  
 <211> 35  
 <212> PRT  
 <213> Homo sapiens

<400> 121  
 Ala Pro Asp Val Ala Glu Leu Ile Arg Thr Pro Met Glu Met Arg Tyr  
 1 5 10 15

Ile Pro Leu Lys Val Ala Leu Phe Tyr Leu Leu Asn Pro Tyr Thr Ile  
                   20                  25                  30

Leu Ser Cys  
           35

<210> 122  
 <211> 35  
 <212> PRT  
 <213> Homo sapiens

<400> 122  
 Val Ala Lys Ser Thr Cys Ala Ile Asn Asn Thr Leu Ile Ala Phe Phe  
   1                  5                  10                  15

Ile Leu Thr Thr Ile Lys Gly Ser Ala Phe Leu Ser Ala Ile Phe Leu  
                   20                  25                  30

Ala Leu Ala  
           35

<210> 123  
 <211> 35  
 <212> PRT  
 <213> Homo sapiens

<400> 123  
 Thr Tyr Gln Ser Leu Tyr Pro Leu Thr Leu Phe Val Pro Gly Leu Leu  
   1                  5                  10                  15

Tyr Leu Leu Gln Arg Gln Tyr Ile Pro Val Lys Met Lys Ser Lys Ala  
                   20                  25                  30

Phe Trp Ile  
           35

<210> 124  
 <211> 35  
 <212> PRT  
 <213> Homo sapiens

<400> 124  
 Phe Ser Trp Glu Tyr Ala Met Met Tyr Val Gly Ser Leu Val Val Ile  
   1                  5                  10                  15

Ile Cys Leu Ser Phe Phe Leu Leu Ser Ser Trp Asp Phe Ile Pro Ala  
                   20                  25                  30

Val Tyr Gly  
           35

<210> 125  
 <211> 35  
 <212> PRT

<213> Homo sapiens

<400> 125

Phe Ile Leu Ser Val Pro Asp Leu Thr Pro Asn Ile Gly Leu Phe Trp  
 1 5 10 15  
 Tyr Phe Phe Ala Glu Met Phe Glu His Phe Ser Leu Phe Phe Val Cys  
 20 25 30  
 Val Phe Gln  
 35

<210> 126

<211> 35

<212> PRT

<213> Homo sapiens

<400> 126

Ile Asn Val Phe Phe Tyr Thr Ile Pro Leu Ala Ile Lys Leu Lys Glu  
 1 5 10 15  
 His Pro Ile Phe Phe Met Phe Ile Gln Ile Ala Val Ile Ala Ile Phe  
 20 25 30  
 Lys Ser Tyr  
 35

<210> 127

<211> 35

<212> PRT

<213> Homo sapiens

<400> 127

Pro Thr Val Gly Asp Val Ala Leu Tyr Met Ala Phe Phe Pro Val Trp  
 1 5 10 15  
 Asn His Leu Tyr Arg Phe Leu Arg Asn Ile Phe Val Leu Thr Cys Ile  
 20 25 30  
 Ile Ile Val  
 35

<210> 128

<211> 27

<212> PRT

<213> Homo sapiens

<400> 128

Cys Ser Leu Leu Phe Pro Val Leu Trp His Leu Trp Ile Tyr Pro Gly  
 1 5 10 15  
 Met Pro Thr Leu Ile Ser Phe Met Pro Ser His  
 20 25

<210> 129

<211> 391  
 <212> PRT  
 <213> Homo sapiens

<220>  
 <221> SITE  
 <222> (180)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<400> 129

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Pro | Thr | Arg | Gly | Ser | Ala | Met | Ala | Glu | Gln | Thr | Tyr | Ser | Trp | Ala |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Tyr | Ser | Leu | Val | Asp | Ser | Ser | Gln | Val | Ser | Thr | Phe | Leu | Ile | Ser | Ile |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Leu | Leu | Ile | Val | Tyr | Gly | Ser | Phe | Arg | Ser | Leu | Asn | Met | Asp | Phe | Glu |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Asn | Gln | Asp | Lys | Glu | Lys | Asp | Ser | Asn | Ser | Ser | Ser | Gly | Ser | Phe | Asn |
|     |     | 50  |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Gly | Asn | Ser | Thr | Asn | Asn | Ser | Ile | Gln | Thr | Ile | Asp | Ser | Thr | Gln | Ala |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |
| Leu | Phe | Leu | Pro | Ile | Gly | Ala | Ser | Val | Ser | Leu | Leu | Val | Met | Phe | Phe |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |
| Phe | Phe | Asp | Ser | Val | Gln | Val | Val | Phe | Thr | Ile | Cys | Thr | Ala | Val | Leu |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Ala | Thr | Ile | Ala | Phe | Ala | Phe | Leu | Leu | Leu | Pro | Met | Cys | Gln | Tyr | Leu |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |
| Thr | Arg | Pro | Cys | Ser | Pro | Gln | Asn | Lys | Ile | Ser | Phe | Gly | Cys | Cys | Gly |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |
| Arg | Phe | Thr | Ala | Ala | Glu | Leu | Leu | Ser | Phe | Ser | Leu | Ser | Val | Met | Leu |
| 145 |     |     |     |     | 150 |     |     |     | 155 |     |     |     |     |     | 160 |
| Val | Leu | Ile | Trp | Val | Leu | Thr | Gly | His | Trp | Leu | Leu | Met | Asp | Ala | Leu |
|     |     |     |     | 165 |     |     |     |     | 170 |     |     |     |     | 175 |     |
| Ala | Met | Gly | Xaa | Cys | Val | Ala | Met | Ile | Ala | Phe | Val | Arg | Leu | Pro | Ser |
|     |     |     | 180 |     |     |     |     | 185 |     |     |     |     | 190 |     |     |
| Leu | Lys | Val | Ser | Cys | Leu | Leu | Leu | Ser | Gly | Leu | Leu | Ile | Tyr | Asp | Val |
|     |     | 195 |     |     |     |     | 200 |     |     |     |     | 205 |     |     |     |
| Phe | Trp | Val | Phe | Phe | Ser | Ala | Tyr | Ile | Phe | Asn | Ser | Asn | Val | Met | Val |
|     | 210 |     |     |     |     | 215 |     |     |     |     | 220 |     |     |     |     |
| Lys | Val | Ala | Thr | Gln | Pro | Ala | Asp | Asn | Pro | Leu | Asp | Val | Leu | Ser | Arg |
| 225 |     |     |     |     | 230 |     |     |     |     | 235 |     |     |     |     | 240 |
| Lys | Leu | His | Leu | Gly | Pro | Asn | Val | Gly | Arg | Asp | Val | Pro | Arg | Leu | Ser |
|     |     |     | 245 |     |     |     |     |     | 250 |     |     |     |     | 255 |     |
| Leu | Pro | Gly | Lys | Leu | Val | Phe | Pro | Ser | Ser | Thr | Gly | Ser | His | Phe | Ser |

| 260 |     |     |     |     | 265 |     |     |     |     | 270 |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Leu | Gly | Ile | Gly | Asp | Ile | Val | Met | Pro | Gly | Leu | Leu | Leu | Cys | Phe |
|     |     | 275 |     |     |     |     | 280 |     |     |     |     | 285 |     |     |     |
| Val | Leu | Arg | Tyr | Asp | Asn | Tyr | Lys | Lys | Gln | Ala | Ser | Gly | Asp | Ser | Cys |
|     | 290 |     |     |     |     | 295 |     |     |     |     | 300 |     |     |     |     |
| Gly | Ala | Pro | Gly | Pro | Ala | Asn | Ile | Ser | Gly | Arg | Met | Gln | Lys | Val | Ser |
| 305 |     |     |     |     | 310 |     |     |     |     | 315 |     |     |     |     | 320 |
| Tyr | Phe | His | Cys | Thr | Leu | Ile | Gly | Tyr | Phe | Val | Gly | Leu | Leu | Thr | Ala |
|     |     |     |     | 325 |     |     |     |     | 330 |     |     |     |     |     | 335 |
| Thr | Val | Ala | Ser | Arg | Ile | His | Arg | Ala | Ala | Gln | Pro | Ala | Leu | Leu | Tyr |
|     |     | 340 |     |     |     |     |     | 345 |     |     |     |     | 350 |     |     |
| Leu | Val | Pro | Phe | Thr | Leu | Leu | Pro | Leu | Leu | Thr | Met | Ala | Tyr | Leu | Lys |
|     |     | 355 |     |     |     |     | 360 |     |     |     |     | 365 |     |     |     |
| Gly | Asp | Leu | Arg | Arg | Met | Trp | Ser | Glu | Pro | Phe | His | Ser | Lys | Ser | Ser |
|     | 370 |     |     |     |     | 375 |     |     |     |     | 380 |     |     |     |     |
| Ser | Ser | Arg | Phe | Leu | Glu | Val |     |     |     |     |     |     |     |     |     |
| 385 |     |     |     |     | 390 |     |     |     |     |     |     |     |     |     |     |

<210> 130  
 <211> 93  
 <212> PRT  
 <213> Homo sapiens

|           |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| <400> 130 |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Glu       | Pro | Thr | Arg | Gly | Ser | Ala | Met | Ala | Glu | Gln | Thr | Tyr | Ser | Trp | Ala |
| 1         |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Tyr       | Ser | Leu | Val | Asp | Ser | Ser | Gln | Val | Ser | Thr | Phe | Leu | Ile | Ser | Ile |
|           |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Leu       | Leu | Ile | Val | Tyr | Gly | Ser | Phe | Arg | Ser | Leu | Asn | Met | Asp | Phe | Glu |
|           |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Asn       | Gln | Asp | Lys | Glu | Lys | Asp | Ser | Asn | Ser | Ser | Ser | Gly | Ser | Phe | Asn |
|           | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Gly       | Asn | Ser | Thr | Asn | Asn | Ser | Ile | Gln | Thr | Ile | Asp | Ser | Thr | Gln | Ala |
| 65        |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |
| Leu       | Phe | Leu | Pro | Ile | Gly | Ala | Ser | Val | Ser | Leu | Leu | Val |     |     |     |
|           |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     |     |     |

<210> 131  
 <211> 323  
 <212> PRT  
 <213> Homo sapiens

<400> 131  
 Met Gly Asn Ser Ala Ser Arg Asn Asp Phe Glu Trp Val Tyr Thr Asp

| 1   | 5                   | 10                  | 15      |
|---|---------------------|---------------------|---------|
| Gln Pro His Thr   | Gln Arg Arg Ala Arg | Pro Pro Ala Lys Tyr | Pro Ala |
| 20  | 25                  | 30                  |         |
| Ile Lys Ala Leu Met Arg Pro Asp Pro Arg Leu Lys Trp Ala Val Leu |                     |                     |         |
| 35  | 40                  | 45                  |         |
| Val Leu Val Leu Val Gln Met Leu Ala Cys Trp Leu Val Arg Gly Leu |                     |                     |         |
| 50  | 55                  | 60                  |         |
| Ala Trp Arg Trp Leu Leu Phe Trp Ala Tyr Ala Phe Gly Gly Cys Val |                     |                     |         |
| 65  | 70                  | 75                  | 80      |
| Asn His Ser Leu Thr Leu Ala Ile His Asp Ile Ser His Asn Ala Ala |                     |                     |         |
| 85  | 90                  | 95                  |         |
| Phe Gly Thr Gly Arg Ala Ala Arg Asn Arg Trp Leu Ala Val Phe Ala |                     |                     |         |
| 100   | 105                 | 110                 |         |
| Asn Leu Pro Val Gly Val Pro Tyr Ala Ala Ser Phe Lys Lys Tyr His |                     |                     |         |
| 115   | 120                 | 125                 |         |
| Val Asp His His Arg Tyr Leu Gly Gly Asp Gly Leu Asp Val Asp Val |                     |                     |         |
| 130   | 135                 | 140                 |         |
| Pro Thr Arg Leu Glu Gly Trp Phe Phe Cys Thr Pro Ala Arg Lys Leu |                     |                     |         |
| 145   | 150                 | 155                 | 160     |
| Leu Trp Leu Val Leu Gln Pro Phe Phe Tyr Ser Leu Arg Pro Leu Cys |                     |                     |         |
| 165   | 170                 | 175                 |         |
| Val His Pro Lys Ala Val Thr Arg Met Glu Val Leu Asn Thr Leu Val |                     |                     |         |
| 180   | 185                 | 190                 |         |
| Gln Leu Ala Ala Asp Leu Ala Ile Phe Ala Leu Trp Gly Leu Lys Pro |                     |                     |         |
| 195   | 200                 | 205                 |         |
| Val Val Tyr Leu Leu Ala Ser Ser Phe Leu Gly Leu Gly Leu His Pro |                     |                     |         |
| 210   | 215                 | 220                 |         |
| Ile Ser Gly His Phe Val Ala Glu His Tyr Met Phe Leu Lys Gly His |                     |                     |         |
| 225   | 230                 | 235                 | 240     |
| Glu Thr Tyr Ser Tyr Tyr Gly Pro Leu Asn Trp Ile Thr Phe Asn Val |                     |                     |         |
| 245   | 250                 | 255                 |         |
| Gly Tyr His Val Glu His His Asp Phe Pro Ser Ile Pro Gly Tyr Asn |                     |                     |         |
| 260   | 265                 | 270                 |         |
| Leu Pro Leu Val Arg Lys Ile Ala Pro Glu Tyr Tyr Asp His Leu Pro |                     |                     |         |
| 275   | 280                 | 285                 |         |
| Gln His His Ser Trp Val Lys Val Leu Trp Asp Phe Val Phe Glu Asp |                     |                     |         |
| 290   | 295                 | 300                 |         |
| Ser Leu Gly Pro Tyr Ala Arg Val Lys Arg Val Tyr Arg Leu Ala Lys |                     |                     |         |
| 305   | 310                 | 315                 | 320     |

Asp Gly Leu

<210> 132

<211> 350

<212> PRT

<213> Homo sapiens

<400> 132

Leu Gln Val Pro Val Arg Asn Ser Arg Val Asp Pro Arg Val Arg Ala  
1 5 10 15

Val Arg Ala Pro Asn Gly Ala Ser Arg Pro Thr Met Gly Asn Ser Ala  
20 25 30

Ser Arg Asn Asp Phe Glu Trp Val Tyr Thr Asp Gln Pro His Thr Gln  
35 40 45

Arg Arg Ala Arg Pro Pro Ala Lys Tyr Pro Ala Ile Lys Ala Leu Met  
50 55 60

Arg Pro Asp Pro Arg Leu Lys Trp Ala Val Leu Val Leu Val Leu Val  
65 70 75 80

Gln Met Leu Ala Cys Trp Leu Val Arg Gly Leu Ala Trp Arg Trp Leu  
85 90 95

Leu Phe Trp Ala Tyr Ala Phe Gly Gly Cys Val Asn His Ser Leu Thr  
100 105 110

Leu Ala Ile His Asp Ile Ser His Asn Ala Ala Phe Gly Thr Gly Arg  
115 120 125

Ala Ala Arg Asn Arg Trp Leu Ala Val Phe Ala Asn Leu Pro Val Gly  
130 135 140

Val Pro Tyr Ala Ala Ser Phe Lys Lys Tyr His Val Asp His His Arg  
145 150 155 160

Tyr Leu Gly Gly Asp Gly Leu Asp Val Asp Val Pro Thr Arg Leu Glu  
165 170 175

Gly Trp Phe Phe Cys Thr Pro Ala Arg Lys Leu Leu Trp Leu Val Leu  
180 185 190

Gln Pro Phe Phe Tyr Ser Leu Arg Pro Leu Cys Val His Pro Lys Ala  
195 200 205

Val Thr Arg Met Glu Val Leu Asn Thr Leu Val Gln Leu Ala Ala Asp  
210 215 220

Leu Ala Ile Phe Ala Leu Trp Gly Leu Lys Pro Val Val Tyr Leu Leu  
225 230 235 240

Ala Ser Ser Phe Leu Gly Leu Gly Leu His Pro Ile Ser Gly His Phe  
245 250 255

Val Ala Glu His Tyr Met Phe Leu Lys Gly His Glu Thr Tyr Ser Tyr

|   |     |     |
|---|-----|-----|
| 260   | 265 | 270 |
| Tyr Gly Pro Leu Asn Trp Ile Thr Phe Asn Val Gly Tyr His Val Glu |     |     |
| 275   | 280 | 285 |
| His His Asp Phe Pro Ser Ile Pro Gly Tyr Asn Leu Pro Leu Val Arg |     |     |
| 290   | 295 | 300 |
| Lys Ile Ala Pro Glu Tyr Tyr Asp His Leu Pro Gln His His Ser Trp |     |     |
| 305   | 310 | 315 |
| Val Lys Val Leu Trp Asp Phe Val Phe Glu Asp Ser Leu Gly Pro Tyr |     |     |
| 325   | 330 | 335 |
| Ala Arg Val Lys Arg Val Tyr Arg Leu Ala Lys Asp Gly Leu         |     |     |
| 340   | 345 | 350 |

<210> 133  
 <211> 27  
 <212> PRT  
 <213> Homo sapiens

<400> 133  
 Leu Gln Val Pro Val Arg Asn Ser Arg Val Asp Pro Arg Val Arg Ala  
   1                  5                  10                  15  
 Val Arg Ala Pro Asn Gly Ala Ser Arg Pro Thr  
                   20                  25

<210> 134  
 <211> 80  
 <212> PRT  
 <213> Homo sapiens

<220>  
 <221> SITE  
 <222> (60)  
 <223> Xaa equals any of the naturally occurring L-amino acids

<400> 134  
 Gly Phe Ser Phe Ser Thr Ser Leu Pro Thr Leu Val Ile Phe Trp Val  
   1                  5                  10                  15  
 Phe Leu Ile Ile Ala Phe Leu Met Asp Met Lys Trp Phe Leu Ile Val  
                   20                  25                  30  
 Val Leu Ile Cys Ile Pro Leu Met Thr Ser Asp Ile Glu His Leu Phe  
                   35                  40                  45  
 Met Cys Leu Leu Pro Phe His Val Ser Ser Leu Xaa Lys Cys Leu Phe  
                   50                  55                  60  
 Lys Ser Phe Ala His Phe Ser Val Gly Leu Tyr Phe Val Val Glu Phe  
   65                  70                  75                  80



<210> 135  
 <211> 23  
 <212> PRT  
 <213> Homo sapiens

<400> 135  
 Gly Phe Ser Phe Ser Thr Ser Leu Pro Thr Leu Val Ile Phe Trp Val  
     1                    5                    10                    15  
 Phe Leu Ile Ile Ala Phe Leu  
                     20

<210> 136  
 <211> 78  
 <212> PRT  
 <213> Homo sapiens

<400> 136  
 Arg Gln Leu Pro Glu Cys Pro Pro Ser Cys Ala Val Ser Cys Trp His  
     1                    5                    10                    15  
 Trp Asp Glu Asp Met Ala Leu Val Trp Leu Cys Phe Leu Asn Ser Val  
                     20                    25                    30  
 Glu Gly Phe Gly Val Ser Arg Ala Pro Pro Leu Ser Pro Pro Leu Glu  
                     35                    40                    45  
 Glu Asn Ala Gln Asp Ser Gly Ala Ser Phe Arg Tyr Arg Lys Thr Lys  
     50                    55                    60  
 Ile Ala Leu Phe Trp Thr Gln Phe Ser Val Thr Ser Ser Leu  
     65                    70                    75

<210> 137  
 <211> 20  
 <212> PRT  
 <213> Homo sapiens

<400> 137  
 Arg Gln Leu Pro Glu Cys Pro Pro Ser Cys Ala Val Ser Cys Trp His  
     1                    5                    10                    15  
 Trp Asp Glu Asp  
                     20

<210> 138  
 <211> 279  
 <212> PRT  
 <213> Homo sapiens

<400> 138  
 His Glu Val Gly Ser Ser Ser Gly Leu Leu Pro Leu Leu Leu Leu  
     1                    5                    10                    15

Leu Leu Pro Leu Leu Ala Ala Gln Gly Gly Gly Gly Leu Gln Ala Ala  
                   20                  25                  30  
 Leu Leu Ala Leu Glu Val Gly Leu Val Gly Leu Gly Ala Ser Tyr Leu  
                   35                  40                  45  
 Leu Leu Cys Thr Ala Leu His Leu Pro Ser Ser Leu Phe Leu Leu Leu  
                   50                  55                  60  
 Ala Gln Gly Thr Ala Leu Gly Ala Val Leu Gly Leu Ser Trp Arg Arg  
                   65                  70                  75                  80  
 Gly Leu Met Gly Val Pro Leu Gly Leu Gly Ala Ala Trp Leu Leu Ala  
                   85                  90                  95  
 Trp Pro Gly Leu Ala Leu Pro Leu Val Ala Met Ala Ala Gly Gly Arg  
                   100                  105                  110  
 Trp Val Arg Gln Gln Gly Pro Arg Val Arg Arg Gly Ile Ser Arg Leu  
                   115                  120                  125  
 Trp Leu Arg Val Leu Leu Arg Leu Ser Pro Met Ala Phe Arg Ala Leu  
                   130                  135                  140  
 Gln Gly Cys Gly Ala Val Gly Asp Arg Gly Leu Phe Ala Leu Tyr Pro  
                   145                  150                  155                  160  
 Lys Thr Asn Lys Asp Gly Phe Arg Ser Arg Leu Pro Val Pro Gly Pro  
                   165                  170                  175  
 Arg Arg Arg Asn Pro Arg Thr Thr Gln His Pro Leu Ala Leu Leu Ala  
                   180                  185                  190  
 Arg Val Trp Val Leu Cys Lys Gly Trp Asn Trp Arg Leu Ala Arg Ala  
                   195                  200                  205  
 Ser Gln Gly Leu Ala Ser His Leu Pro Pro Trp Ala Ile His Thr Leu  
                   210                  215                  220  
 Ala Ser Trp Gly Leu Leu Arg Gly Glu Arg Pro Thr Arg Ile Pro Arg  
                   225                  230                  235                  240  
 Leu Leu Pro Arg Ser Gln Arg Gln Leu Gly Pro Pro Ala Ser Arg Gln  
                   245                  250                  255  
 Pro Leu Pro Gly Thr Leu Ala Gly Arg Arg Ser Arg Thr Arg Gln Ser  
                   260                  265                  270  
 Arg Ala Leu Pro Pro Trp Arg  
                   275

<210> 139  
 <211> 166  
 <212> PRT  
 <213> Homo sapiens

<400> 139  
 Met Gly Val Pro Leu Gly Leu Gly Ala Ala Trp Leu Leu Ala Trp Pro

|   |     |     |     |
|---|-----|-----|-----|
| 1   | 5   | 10  | 15  |
| Gly Leu Ala Leu Pro Leu Val Ala Met Ala Ala Gly Gly Arg Trp Val | 20  | 25  | 30  |
| Arg Gln Gln Gly Pro Arg Val Arg Arg Gly Ile Ser Arg Leu Trp Leu | 35  | 40  | 45  |
| Arg Val Leu Leu Arg Leu Ser Pro Met Ala Phe Arg Ala Leu Gln Gly | 50  | 55  | 60  |
| Cys Gly Ala Val Gly Asp Arg Gly Leu Phe Ala Leu Tyr Pro Lys Thr | 65  | 70  | 75  |
| Asn Lys Asp Gly Phe Arg Ser Arg Leu Pro Val Pro Gly Pro Arg Arg | 85  | 90  | 95  |
| Arg Asn Pro Arg Thr Thr Gln His Pro Leu Ala Leu Leu Ala Arg Val | 100 | 105 | 110 |
| Trp Val Leu Cys Lys Gly Trp Asn Trp Arg Leu Ala Arg Ala Ser Gln | 115 | 120 | 125 |
| Gly Leu Ala Ser His Leu Pro Pro Trp Ala Ile His Thr Leu Ala Ser | 130 | 135 | 140 |
| Trp Gly Leu Leu Arg Gly Glu Arg Pro Pro Glu Ser Pro Gly Tyr Tyr | 145 | 150 | 155 |
| His Ala Ala Ser Ala Ser   | 165 |     |     |

<210> 140  
 <211> 225  
 <212> PRT  
 <213> Homo sapiens

|   |
|---|
| <400> 140   |
| Gln Gly Gly Gly Gly Leu Gln Ala Ala Leu Leu Ala Leu Glu Val Gly |
| 1 5 10 15   |
| Leu Val Gly Leu Gly Ala Ser Tyr Leu Leu Leu Cys Thr Ala Leu His |
| 20 25 30  |
| Leu Pro Ser Ser Leu Phe Leu Leu Leu Ala Gln Gly Thr Ala Leu Gly |
| 35 40 45  |
| Ala Val Leu Gly Leu Ser Trp Arg Arg Gly Leu Met Gly Val Pro Leu |
| 50 55 60  |
| Gly Leu Gly Ala Ala Trp Leu Leu Ala Trp Pro Gly Leu Ala Leu Pro |
| 65 70 75 80   |
| Leu Val Ala Met Ala Ala Gly Gly Arg Trp Val Arg Gln Gln Gly Pro |
| 85 90 95  |
| Arg Val Arg Arg Gly Ile Ser Arg Leu Trp Leu Arg Val Leu Leu Arg |
| 100 105 110   |

Leu Ser Pro Met Ala Phe Arg Ala Leu Gln Gly Cys Gly Ala Val Gly  
 115 120 125  
 Asp Arg Gly Leu Phe Ala Leu Tyr Pro Lys Thr Asn Lys Asp Gly Phe  
 130 135 140  
 Arg Ser Arg Leu Pro Val Pro Gly Pro Arg Arg Arg Asn Pro Arg Thr  
 145 150 155 160  
 Thr Gln His Pro Leu Ala Leu Leu Ala Arg Val Trp Val Leu Cys Lys  
 165 170 175  
 Gly Trp Asn Trp Arg Leu Ala Arg Ala Ser Gln Gly Leu Ala Ser His  
 180 185 190  
 Leu Pro Pro Trp Ala Ile His Thr Leu Ala Ser Trp Gly Leu Leu Arg  
 195 200 205  
 Gly Glu Arg Pro Pro Glu Ser Pro Gly Tyr Tyr His Ala Ala Ser Ala  
 210 215 220  
 Ser  
 225